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Carroll W Dodge



# Mycological Notebook

consisting of field notes, observations etc.  
discussions of the literature of species col-  
lected as well as tables, keys, etc collected  
from sundry sources.

by

Carroll William Dodge A.M.

Volume One

June 1917 - March 31, 1920





June 10, 1917. 1001-5. Very late spring. Has rained for several days, including today. At saphouse discovered a large quantity of 1002 ( ) in a pile of chunks. At first thought it one of Tremellaceae but the presence of minute papillae raised question as to its being an immature pyrenomyces. Observe further. Many pyrenomyces abundant, some perhaps in the conidia stage as they were pruinose. A ~~Sepiota~~ 1003 and ~~Collybia~~ 1004 and a small amount of *Coprinus micaceus* (?) only Agarics seen. *Polyporus sanguineus* (?) seen, not collected. One of Pezizaceae 1001 and a rust on gooseberry (?) in swamp 1005, complete collections.

June 11, 1917. 1006 *Favolus canadensis* Klotzsch in sense of Fries. This specimen is squamulose and fibrillose, ferruginous in center of larger sporophores. Cf. distinction between *F. europaeus* & *F. canadensis* in Fries *Epicrisis* 498-9. 1836-8. Overholts thinks they are synonymous, the *F. europ.* forms being older stages. See if field observations will corroborate this.

June 13, 1917 1007-1014

Fungi found growing among grasses in front of shop on either side of partially rotted plank. Are they different stages of the same. Some specimens like #1009 were left for collection later to see if they develop into fungi like 1008. Collected some resupinate fungi from the bottom of an old brush pile (~~Alnus~~, Betula &c on the way after the cows.

June 14, 1917 1008a, 1015 ~~to~~ 1016

Rained the greater part of the day. Collected a disease on *Ansaemini triphyllum* (L.) Schott. (#1015 *Uromyces Calladii* (Schw) Farl). May be connected with insects as red lice or scale insects were invariably present on diseased leaves, causing a very marked mottling such as occurs in mosaic disease of tobacco, <sup>see p. 25</sup> Specimens like 1002 were white pruinose, drying down gradually noted tonight. 1008a specimens left to develop from the 1008 collection collected. One of *Pezizaceae*, one of *Agaricaceae* and two polypores noted in quantity. Also *Polyp. hirsutus*, *Fomes applanatus* noted, causing disease.



decay of Acer, as also the sterile stroma of *Ustilina*(?) especially on an old stump which bore *Coprinus micaceus* the early part of the preceding summer.

June 22, 1917. 1017-1020, 1022-1023.

Weather has been pleasant for the past few days, all the fleshy forms noted June 14 and not collected have dried or disappeared. Noted one of *Bulgariaceae* two or three <sup>of the</sup> *Telephoraceae* + two or three of the *Polyporaceae* which I could not collect without a knife.

June 23, 1917. 1024-1028

Pleasant weather. Cecil collected this morning, bringing in two specimens of *Boletus scaber* (# , ). Both were infested with larvae. Oxidase action strong. When I split the stipe, fleshy was white turning slightly greenish, then brown, about the color of *A. campestris* after ground up for enzyme extraction. Turned gray on drying. Does this color change hold true for the whole species or in the variety which has been named from this character?

Also a beautiful pink fungus with thick

lamellae which tear very easily into two plates. He also brought in an immature *Fomes*, and some *Polystictus* like specimens

On trip tonight collected an *Irpex*, perhaps a polypore, which was noted in fresh condition June 14, 1917. Only a portion was collected. A beautiful orange red agaric (*Mycena leiana*?) collected, perhaps pink spores. Several specimens of a *Stemonitis* noted on dead wood. Also a fallen beech with *pyrenomycetes* abundant, and a fallen branch tree with lichens (crustose) which I did not stop to examine closely.

June 24, 1917. 1029 - 1030.

Rained all day. Collected only a *Favolus* & *Boletus variipes* var *pallidipes* Pk. (#

Is there any connection between *Boleti* & young birch woods? Saw a ~~discomycete~~ discomycete, bright red, a few stray agarics and two or three *Stereum* which show up better after their soaking. *Stictis pulmonaria* & *S. amplissima* very abundant and conspicuous also one or two *Stereocaula* and *Ramalinae*

The black gelatinous fungus on the wood pile at the sap house is soaked up but not so large & fresh looking as formerly (#1002) Noted *Daedalea quercina*? on *Juglans cinerea* log.

June 29, 1917. 1051-1060.

1051 *Boletus scaber* <sup>(aurantiacus)</sup> has white flesh.

The cap, then the stipe more slowly turns from pink to brown then to nearly black

The tubes <sup>are white</sup> gradually follow the same color change

The outside of the stipe <sup>blue</sup> green where eaten by insects?

A rainy day. Collected on the side of sugar woods facing east. *Tricholoma grande* <sup>Pk</sup> abundant, also *Hygrophorus chlorophanus* Fr, I saw a specimen of one of *Bulgariaeaceae* or *Stilbaceae* which I could not collect owing to lack of jackknife. Saw *Fuligo* (?) several *pyrenomyces* or their imperfect stages. Saw a *Fomes* (?) sp. with white pores recurvate on end of log which might have been mistaken for a *poria* but for the narrow plexus at the top.

July 5, 1917 1061-1062,

Two agarics from north of Mrs Woodards house

One ~~poly~~ pore from a ho spruce stump. Saw a *Pleurotus*

not *ostreatus*, *Polyporus versicolor* and other polypores which I did not collect.

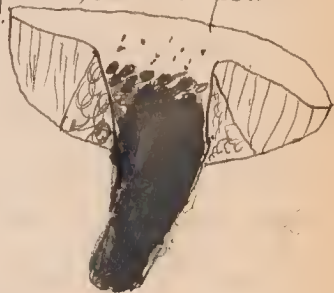
July 7, 1917. 1077-1083

No rain for a week, Saw *Tricholoma grande* (P) but too dried and insect eaten to collect.

young pilei of *Polyporus perennis* or *cinnamomeus*; scattered, partially dried specimens of *Hygrophorus chlorophanus*; collected *Pleurotus ostreatus* to eat.

*Boletus decorus* (#1077) would be an interesting one to work out oxidases and chromogens. When cut in two the stipe has a deep red brown color occurring in spots which in the lower part run together to form a solid.

color. The tubes turn a greenish hue on being cut which color gradually migrates toward the top of the pileus. The red brown dots



*Boletus decorus*

[natural size]

appears on the flesh and a very thin layer of red brown appears just under the top of the pileus. Collected three specimens of varying size, probably *Tricholomata*, the smaller of which was areolate all over with the stipe, covered with long areoles dried and turned up at the end, the another with only the ~~disc~~ margin and stipe and the larger umbilicate with only the margin beginning to be areolate. Can these be varieties, or different stages of the same species? They were found growing, not more than two rods apart on ground among grasses, under the bicks on the top of the "Toune" lot.

July 8, 1917 1084-1088

Still no rain, saw *Hygrophorus chlorophana* usually dry, a few lemon yellow and a few bright red pilei growing among them. *Boletus scaber* var. *alutaceus*. #1084 is notable for having a shorter stipe, and for its flesh not turning brown very rapidly the stipe turning very slowly, the stipe being only clay color on the upper end after all

notes taken and this written. There is a thin layer just inside the outer covering which is already an intense black. What is it?

*Hygrophorus conicus* Scop ex Fr #1087.

Is this a connecting form between *H. conicus* and *H. cuspidatus* Ph. I take it from Murrill's descriptions that *H. cuspidatus* differs only in not blackening, of which however he does not state in his description, and in the more slender glabrous stipe. Look up Peck's original description and see if there is any real difference else why should it be confined to its original collection & ~~to~~ locality. Are his spore measurements reliable? ~~none~~ My specimens blacken, have a short stipe which is thicker than *H. cusp.* but looks nearly glabrous.

These specimens are as small as *H. cuspidata*

*Agaricus conicus* Scop Fl Carn ed L. 2:443, 1772.

*Hygrophorus* " Fr. Epic. Myc. 331. 1838

1 *Hygrophorus cuspidatus* Peck Bull Torr Club 24:141. 1897

see also

Murrill N Am Fl 9:379, 1916.



July 11, 1917

good soaking rain

July 12, ~~1917~~ 1917 1089-1092

1089 *Boletus versipellis* Fr. This specimen certainly has the margin appendiculate and turned under, but otherwise does not seem distinguishable from *Boletus scaber*. Are they distinct? Fries in his *Epicrisis* 424. contrasts sicco pruno with udoviscido of *B. scaber* and velo membran. angulari inflexo appendiculato with margine cortinato of *B. scaber*. He inquired whether *B. versipellis* has "sporidia rotunda" as painted by Schaeffer t. 103. He states *B. scabii* certe fusiformia. Cfr Kollerbultz apud Clus. Hist. p. 284. Sterb. t. 15. A.

Murrill cites *B. versipellis* as a synonym with a question mark.

1091 *Collybia floccipes* Fr? Epic 87. color of pileus does not agree, not umbonate. Unable to identify by Murrill's keys.

1092 *Tricholoma*

another species I am unable to identify by Murrill's keys, by Cooke & Saccardo & Fr. I was unable to decide whether it belongs in *Simacina* or *Hygrophana*.

Cecil brought in a specimen of *Polyporus cinnabarinus* nearly as daedaleoid as a *Daedalea* but the pores are very much smaller.

July 13, 1917      1094-1113    1128, 1129

1096 *Boletus calopus*? has color reactions like *Boletus decorus* p. 10, and perhaps is that species. Stem not noticeably reticulated.

1111 a very curious saddleshaped discomycete 1109 destroyed by insects, number used over.

July 15, 1917      1114

*Mutinus* brought in by papa from sap house, the outer envelop not collected rained hard in the late P.M.

July 16, 1917. 1115-9.

Noted several cases of mosaic disease. Cecil brought in some *Fomes applanatus*. Collected four forms on way back from swimming pool. *Tricholoma* and *Collybia*. It seems strange I should not find annulated <sup>stipe</sup> or decurrent lamellae and spore colors other than white. Found one ferruginous today and two *Strophariae*. Collected what I expect is a *Mutinus* egg and placed it in light moist soil to see if it will develop. Noted some more like #1008 and 1009 growing in the same place collected July 17, 1917.

July 17, 1917. 1120-1127; 1109; 1130

Mamma collected one of the *Xylariae* while feeding hens. Cloudy today, rained just at night. Collected some in sugar woods, also another *Mutinus* from same place as #1114. Perhaps some have colored spores.

July 18, 1917. 1131-1137.

# 1131 *Boletus subtomentosus*. Very little color change. Was this because they were put in the refrigerator ~~until~~ morning before they were identified.

# 1136 *Collybia radicata* Rehl (Kellham ex Fr.)

This specimen has slightly decurrent lamellae as also the #109 which was destroyed. Should this not be placed with *Clitocybe*. See spores.

Is *Clitocybe megalospora* Clements Brit Mus Nebr 4: 18. 1896 a synonym. Who is authority for *C. radic.*

*Agaricus (Collybia) radicata* Fr. Syst Myc 1: 116. 1821

" " " Fr. Epic Syst 81. 1838

Fries separates *Ag. longipes* Bull. Herb Fr pl 232 1784 from it in Epic Syst Myc. 81, 1838 for white specimens. Found a spec of *Ag. longipes* pure white smaller, younger and extremely viscid. They seem to me distinct altho they dry alike.

July 19, 1917 1138-1141

1139 and 1140 were collected near each other

May be the same thing

July 21, 1917 1142-1143.

Dry yesterday, ~~was~~ rained some last night.

The mutinus specimens both have developed, but was too busy with hay yesterday to think of them

July 22, 1917 1144-1176 except 1163.

Rained a little yesterday. 1168 probably the same as 1167 as it was collected on the same side hill. Clavariae give much trouble on drying, bleaching and staining the blue tissue paper, staining the labels and obliterating the ink.

July 24, 1917 1177-1198

Is 1177 a young *Boletus* infested with a myxomycete— It hardly seems to be one of the *Pulverulenti*. If it is, it is *B. Ravenelli* B+C. or *auriflammeus* B+C.

1178 Flesh sky blue, tubes blue green, The color of the flesh appearing slowly and disappearing slowly. The <sup>color of</sup> flesh tubes appearing rapidly and disappearing slowly.

Have found several decayed *Boleti* enshrouded by a white mycelium. Collected one a little firmer than the others. no number. Study.

# 1190 and 1191 both *Seprata* were collected about three feet from each other and may be same species. # 1192 & 1193 both *Myxomycetes* were collected near each other (about 2 in apart).

*Myxomycete* plasmodia are very abundant in the "Woodard" woods.

July 25, 1917      1198-1199

July 26, 1917      1163, 1200-1213.

#1202 a *Cantharellus* shows reticulated lamellae suggesting the genus *Merulius*.

July 30, 1917      1214-1230.

Trip around Tadmer hill, collecting mostly *Russulae*. Rained yesterday.

Notes on 1225-1230 written up next morning when specimens were less fresh.

Aug 1, 1917      1231

Cecil brought in a *Chitocybe*. very hot weather.



August 2, 1917 1232+

#1232 was collected near the spot where an agaricus with a very thick annulus was collected a short time before ( )

In this however the veil seems thicker and more firmly attached to the margin than to the stipe. Is this a *Hypholoma*?

Slight sprinkle yesterday, hard shower today. Found very little to collect. ~~saw~~ saw one sp scarcely beyond the button stage. The buttons were arranged in two rows at right angles to each other, each about 3 feet long but not forming a ring as far as I could detect. —. Will try to collect

tomorrow. Found a peculiar growth like a cedar apple but firmer on a wild *Rosa* sp. Collected two other agarics unable to write up, so destroyed.

~~On~~ August 4, 1917 1233-1234.

Collected remains of sp. mentioned above in button stage (#1233). Most had been trampled.

Collected *Thelophora* on corn stalks. #1234

August 8, 1917. # 1235, 1236

*Boletus scaber* var *nivens* according to Peck.  
*Ceromyces viscidus* (L) Murr. Nam Fl. 9:139.  
 where he gives among the synonyms  
*Boletus nivens* Fr. Obs. Myc. 1:111.

These specimens do not change color when wounded. Should this be regarded as distinguishing?  
 Look up above reference to Fr. Also see what  
<sup>Trace quite but as var of *scaber* see p. 22.</sup>  
 Sacc. has done with *B. nivens*. The  
 fire was low and the specimens decayed before  
 they dried. see p. 24.

Aug 9, 1917 1237

Very rainy day. Went thru the woods and  
 did not see any animal forms. numbered a  
 few specimens collected in previous years.

Aug 21, 1917 1238-1247

Rainy and cold for the last 10 days have had  
 headaches. Collected an ambiguous spec.  
 today with lamellae all the way from light  
 pink to dark brown. It seems like an agaricus  
 # In connection with #1242 cf. *A. purpurina*  
 and *A. uncialis* Tastermild.

#1245 seems to fit *Russula ventricosipes* Ph.  
except size and stipe character.

Aug 24, 1917. 1248

#1248 *Boletus purpureus* Fr. I cannot seem to locate this name in murrill. The description of it as given is Peck fits fairly well except there is no trace of purple in the stipe color and no reticulations noted. The extreme rapidity of color change from yellow to bottle green is very noticeable. It is also curious that an area in cross section at the base of the stipe turns only after a minute or two but becomes much blacker gradually the color fades on the action of strong light. The top of the pileus stains paper a light green



X natural size

Aug. 29, 1917 744-779

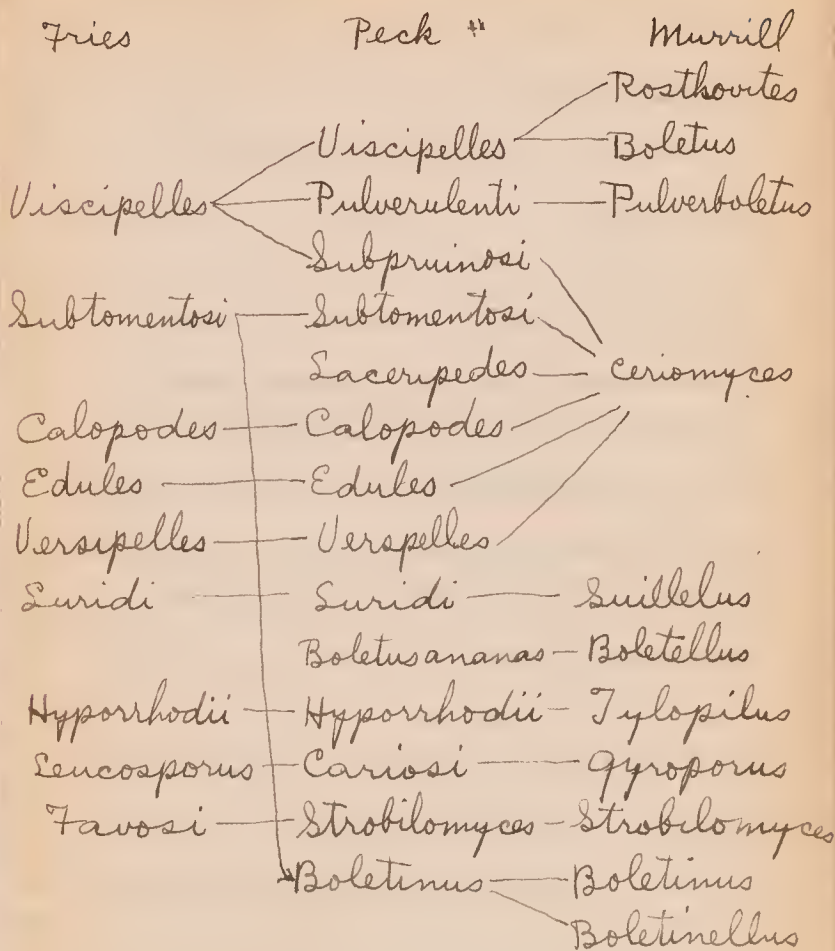
A very rainy day. Cecil and David brought in two lots of fungi. Those known were dried at once as usual. Notes were taken on a few, the rest were taken to St Louis wrapped in tissue paper in my collection basket.

Sept 17, 1917 # 1155

Compared *Boletus*. Very unsatisfactory to compare dried material. In connection with #1155 *Boletus chrysenteron*, unable to determine more than before. In this connection *B. chrysenteron albocarneus* Peck 1900 fits these specimens except he states that the flesh is constantly white except near cuticle where it is red. My field notes say slowly changing to blue when wounded.

*Boletus niveus* Fr Obs Myc. 1:111. Sacc gives:  
*Boletus scaber* [var] E piles omnino albo; *B. niveus*  
 Fr Obs I p 111 cum forma aeruginea Obs II p. 260, *B.*  
*holopus* Rost. t 48 Cfr Wimm p 303 Clus Fern  
 gen IX spec 2.

Peck says: *Boletus niveus* Fr. sandy soil...



Gates, Harry S. Comparative Histology  
 of ~~Certain~~ Californian Boletaceae  
 Univ. Calif. Pub. Bot 6:224, 1916.

This has by some been considered a white variety of *Boletus scaber* Fr. It appears to us to be worthy of specific distinction, for it differs from that species not only in the color of the pileus but also in its smaller size tubes and in the character of the stem, which is adorned with mere scurfy or appressed squamules instead of the conspicuous dot-like fibrous scales of the stem of *B. scaber*.

Peck C.H. Rept St. Bot <sup>#61 for</sup> 1907 N.Y. St Mus Bull. 122: 17. 1908 plate 113.

Field notes of 1235:

*Boletus niveus* Fr [*B. scaber* var *niveus*]  
 pileus white ~~unchanging~~ <sup>becoming</sup> light buff, flesh  
 white, unchanging tubes free, white,  
 stipe fibrous cartilaginous white without  
 punctate squamose as in *B. scaber*  
 On earth in swamp, Tadmer area, Pawlet, Vt.  
 C.W.D. Aug 8, 1917



- # 1015 *Uromyces Ari-triphylli* (Schw) — teste Arthur  
in Nam Fl. 7: 236.  
*Aecidium Caladii* Schw. Sch. Nat. Ges. Leipzig 1: 69. 1822  
II 4: 329. 1832  
*Caecoma (Aecidium) draconthonatum* Schw. Trans. Am. Phil. Soc.  
*Puccinia Ari-triphylli* Schw. Trans. Am. Phil. Soc. II 4: 297. 1832  
*Caecoma (Aecidium) aroidatum* <sup>(Singer)</sup> Schw. Ibid. II 4: 309. 1832  
*Uromyces Peltandrae* Howe Bull. Torr. Bot. Club 5: 3. 1874  
*Uromyces Ari-virginici* Howe Ibid. 5: 43. 1874  
(*Caecoma (Uredo) Ari-virginici* Schw. Trans. Am. Phil. Soc. II 4: 297. <sup>1832</sup>)  
*Uromyces Arisemae* Cooke Bull. Torr. Bot. Club. 6: 32. 1875  
*Uromyces Calladii* Farl.; Ellis N. Am. Fungi 232. 1879.  
*Negredo Calladii* (Schw) Arthur Nam Fl. 7: 236. 1902.

Dacc. Syll I: gives *Uromyces Calladii*  
(Schw) Farl. and *Aecidium dracontii* Schw  
as separate spp. citing Cooke Handb. Brit  
Fungi 2: 538. 1871 #1611 as authority for  
spelling for *Ae. Dracontii* instead of  
*Dracontionatum* as Schw spelled it. In  
Dacc. Syll 2: 582. 1912 he divides  
*U. Calladii* (Schw) Farl into *U. Ari virginici*  
(Schw) Howe and *U. Arisaemae* Cooke, the  
*U. Calladii* being improper on acct of Int Rules.

Sydow Mon. Ured. 2: .1910 recognises  
*U. Arisaemae*, *U. Arivernici* and *U.*  
*peltandrae*. Howe

Arthur N Am Fl 7: 236. 1912 lumps all the  
 above under *Uredo Calladii* (Schw) Arthur.

Study further to see if the contrast in  
 the descriptions which follow will hold.

2861.51 <sup>(acoma)</sup> <sup>(cecidium)</sup> C.A. *Dracontionatum* L.v.S. frequens in  
 foliis et petiolis etiam scapis Ari Dracontii  
 Bethl. Non idem cum priori [CA Aroidatum L.v.S  
 Syn Car 457.] Etiam Salem.

*C. maculis pallidis late extensis plerumque*  
~~per totam foliorum superficiem v. magnam~~  
~~in part~~ in folio, fere totum saepe  
 occupantibus. Pseudoperidiis magnis  
 sparsis crebris, sine ordine in macula  
 dispositis. Sporidiis aurantiacis

*Uromyces Arisaema* Cooke (Dacc. Dyll 21:)

... aecidiis hypophyllis sine maculis  
plerumque per totam foliorum superficiem  
v. magnam eius partem aequaliter distributis  
minutis breviter cupulatis flavis margine  
inciso; aecidiosporis angulato-globosis  
v. ellipsoideis minute verrucosis, hyalino-  
flavidis 18-26  $\mu$  15-21... Hab in foliis  
*Arisaema Dracontii*, *macrospathi*  
*triphylli* in America boreale et Mexico.

Christman figures *Uromyces Arisaemae*  
Bot Gaz 39: pl 8 fig 13. 1905

Collation of Karsten, <sup>PA</sup> Symbolae ad Mycologiam  
fennicam.

I Notiser ur Sällskapetets pro Fauna et Fl. Fenn. Förhandlingar 1871 (1878) 11: 211-268.

II

III Soc. pro Fauna et Fl. Fennicam, Meddelanden 1: 54-59. 1876 (Helsingfors)

IV Ibid. 2: 171-183. 1878. V Ibid

VI Soc pro Fauna et Fl Fennicam. Meddelanden 5: 15-46. 1880

VII-VIII Ibid 6: 1-6. 1881, 6: 7-13. 1881.

IX-XI Ibid 9: 39-56. 1883; 9: 57-67. 1883; 9: 68-71. 1883

XII Ibid 9: 110-112. 1883.

XIII-XIV Ibid 11: 1-20. 1885; 11: 21-27. 1885

~~XV~~

XVI Soc pro Fauna et Fl Fenn. Meddelanden 11: 148-161. 1885

XVII Ibid 13: 159-165. 1886.

XVIII-XXI Ibid 14: 78-84. 1888; 14: 85-94. 1888; 14: 95-102. 1888

XXI-XXII Ibid 14: 103-110. 1888; 14: 147-152. 1888.

XXIII-XXVIII Ibid 16: 1-13. 1888-91; 16: 14-19. 1888-91.

16: 20-26. 1888-91; 16: 27-32. 1888-91; 16: 33-36. 1888-91

16: 37-45. 1888-91. ~~XXIX~~ 16: 84-106. 1888-91.

XXX Ibid. 18: 61-68. 1891-2. XXXI 18: 69-74. 1891-2

XXXII acta Soc pro Fauna et Fl Fenn. 9: 1-11. 1893.

XXXIII *ibid* 11:<sup>5</sup> 1-11. 1895

# *Mycologia Fennica*

*Pars prima Discomycetes. Bidrag till Kännedom af. Helt Finlands Natur och Folk utgifna af Finska Vetenskaps Societeten* 19: 1-263. 1871.

*Pars secunda Pyrenomycetes* *ibid* 23: 1-252. 1873.

*Pars tertia Basidiomycetes* *ibid* 25: 1-377. 1876

*Pars quarta Hypodermii, Phycomycetes et Myxomycetes*  
*ibid* 31: 1-144. 1879

11

11. 11.

11. 11.



Specimens of Hymenogasteraceae in Ms. Bot Gard Herb.

*Gautiera graveolens* Thüim Mycoth. Univ. 12. <sup>also Lloyd & Mueller</sup>  
 ✓ ex herb. P. Magnus unter Picea excelsa bei Eisleben,  
 Juni 1875 leg. J. Kuntze. MBGH 5637.

*Hydnangium carneum* Thüim Mycoth Univ. 109 <sup>Lloyd also</sup>  
 ✓ ex herb. Hb. Schenk Bot. Gard. Cambridge, Mass. Feb. 1894.

### TYPE

*Hymenogaster cerebellum* Cavara Fung Song 169

✓ *citrinus* Berkeley Brit. Fung. 284 OK.  
 Lloyd 142 MBG 5649

*Klotzschii* Rab. Fung. Eur. 142. (1860).

✓ \* *lilacinus* Berkeley Brit Fung. 365

✓ + *populetorum* <sup>Zul</sup> Berkeley Brit Fung 304  
 MBG 5650

*tener.* Rabenhorst Fung. Eur. 1320 (1869).

*Melanogaster Broomeanus* Berk. Brit Fung. <sup>= M. variegatus var. Br.</sup> authentic  
 MBG 5646  
~~*Dwainianus* Klotzsch. in Herb. Rab. Winter F. Eur. 3436. (1882)~~  
*variegatus*

ex herb. Hollos

MBG. 5644

\* published as type of *H. tener*.

\* unreliable, packets said to contain *H. vulgaris* & *H. tener*

Zul F. Hyp. 68; Berk. Ann Mag Nat Hist 18: 74. 1846 <sup>†</sup> said to be  
 incorrect by Zulaen. F. H. 66. = *P. livaceus*

*Octaviania rosea* Harkn Rab. Wint Fung Eur. 3238 (mBg 5638)

*Octaviania Stephensii* Rav. Fung. Carol 2:71.

Fung Am. 16

Ellis N. Am Fung 1211.

var *Ravenellii* ~~Curtis~~ B+C.

Ex herb. Sanning... in Terra graminosa

Carolina australi Nov. 1853. M.A.C. (mBg 5642)

*Octaviania rosea* Harkn.

= *Arcangelhella rosea* (Harkn) Z. + D.

Fructifications globose to irregularly lobed 1-3 cm  
(Harkn) now Dec 1917 0.6-0.8 cm in diameter

pale rose (Harkn) dark reddish brown now.

fibils small black innate inconspicuous.

<sup>septa</sup>  
~~peridium~~ thin 40  $\mu$  thick tawny gelatinized so that structure  
not recognizable, fragile.

gleba tawny, cavities large empty irregular <sup>septa</sup>

~~cavities~~ of rough large loosely woven gelatinizing  
<sup>hyphae</sup>  
peridium  
~~septa~~

basidia cylindric to slightly clavate 37.5 x 10.

<sup>mostly 1 spored</sup>  
verrucose, with swollen sterigmata 6-8  $\mu$ .

spores globose hyaline with wall 3  $\mu$  thick.

echinate with short, pointed spines, 14-17 inside  
diam. 20-23 total diam.

Specimen examined

California; near San Francisco, H. W. Harkness in

Rabenhorst Winter Fungi Europaei 3238. Jan-Apr.

(in Ms Bot Gard Herb. 5638.

see additional note p. 142. 3:34. 1921.

Study while at Lloyd's

~~Melanogaster specimens from Carolinas  
especially Charleston S.C., where the type  
of *Hyperrhiza*<sup>carolinensis</sup>, the type of the genus was coll.  
all *Rhizopogon* spec. from Australia, New Zealand  
Sweden, Finland, Bohemia, etc..~~

~~As soon as *Rhizopogon* is finished, study  
*Gautiera* in detail, then *Hydnangium*  
vs. *Octaviania*.~~

~~Study enough *Hydnangium* to be familiar  
with the genus. How separated from  
*Rhizopogon* and *Melanogaster*.~~

*Hydnangium carneum*


Fructification ellipsoid to irregular, 8 X 1.3 cm  
when dry, cinnamon now. )

fibrils innate, darker  
duplex, outer round of loosely woven thin walled hyphae  
peridium 4-8  $\mu$  in diam, 60-90  $\mu$  thick, inner more compact  
smaller hyphae, tawny 160-200 thick.

gleba fragile

cavities globose to irregular, near ochraceous-buff.

septa 40  $\mu$  thick, dark tawny gelatinized fragile

basidia  verrucose, hyaline or slightly colored

mostly two spored. 15 X  $\mu$  with sterigmata

tapering, 7.5  $\mu$  long. 2-4 spored

spores globose <sup>to ovoid</sup> echinate medium walled 3-4  $\mu$

from inside of wall to end of spines, protoplasm

12 X 14  $\mu$ .



Specimen examined:

Massachusetts Cambridge, Botanic garden H. V. Schrank

(in Mo Bot Gard. Herb. 1607.) Feb. 1894.

*Gautiera graveolens* Vitt.

Fructification globose to somewhat irregular  
greatly flattened when dried. 2 cm in diam  
color from light ochraceous ~~brown~~<sup>buff</sup> to Prout's brown  
peridium wanting

gleba, ochraceous buff to darker, gelatinized somewhat  
cavities irregular to sublabrynthiform.

septa 175  $\mu$  thick of interwoven gelatinized hyphae

basidia broadly clavate  $12 \times 16 \times 8-9$ .

famly thick walled with sterigmata

4-5  $\mu$  long.

spores elliptic longitudinally ribbed  $19 \times 11-12$   
slightly colored.

## Specimen examined

Germany: ~~Brandenburg~~, Saxony, near Eisleben,

f. Kuntze ex herb. P. Magnus (in Mo Bot Gard Herb. 5637.)

June 1875.



Bosc's species are located in Padua Italy.  
(Harot) Durand also may have studied  
these types.

*anthracophloeus rhizopogonoides* Mattirollo,  
unknown whether distributed published or not.

Lloyd Museum 12171 *anthracophloeus rhizopogon*

Once collection, received in formalin

The fresh plant has a distinct thick <sup>reddish</sup> peridium 1 mm thick with external pores.  
The gleba is white. The cells and spores are similar to *Rhizopogon rubescens* as is the plant excepting its thick peridium & thick it would have been much better to have included it in *Rhizopogon* as its only difference is its relatively thick peridium.  
Charles V. Corner, Leakey's Gardens, Mauritius.

This collection consists of one dried down herbarium and two vials of preserved material, one containing 4 the other 7 fruiting cones.

Fructifications globose 1.7-3.7 cm in diam. Preserved specimens Hessian brown with spots of Coral pink similar to nothing of *R. maculatus* fibrils few free somewhat branched, very prominent Hessian brown to darker gleba white, but cut surface does not extend deep enough so can get a very good idea of its texture.

Lloyd Museum 63709  
Collezione Mattirol  
*Melanogaster variegatus* Vitt

Rodero (Prov. di Como). [Italy] No 13. Oct. 1900  
leg O. Mattirol

1654. *Rhizopogon provincialis* (in Sloyd Museum)

"This species is quite rare <sup>in Europe and</sup> both in this country.

It is characterized by the abundant adherent, mycelial fibrils. Otherwise it is close to the more common *Rhizopogon rubescens*

- Sloyd Note.

The Sloyd Library is located at 309 W. Court ~~at~~  
The Wholesale drug house of which he is a member  
on the corner of W. Court and Plum, and the  
Museum at 226 W. Court. The Museum is  
three stories. The ground floor being Mr C. G. Sloyd's  
bachelor apartment, with some of his books as  
saccharo etc. The second floor contains a  
workroom at one end separated by a glass partition <sup>in</sup>  
from the herbarium. In the work room is a  
large table (4/4 square) filled with M.S. and  
undetermined specimens, three arm chairs  
two of which are loaded with specimens.  
One side is all window space, with two  
small shelves to hold a microscope.  
The walls are filled with books except for

the fireplace <sup>with coal, etc</sup> over which is a portrait of Massee with one of his letters, flanked by Ellis and ———. On either side of the door are portraits of Bresadola and Saccardo.

The herbarium consists of wooden shelving containing the boxes of specimens. The specimens are placed in boxes 6.5X7cm varying in depth with the specimens those containing *Rhizopogon* being 2, 4.5 or 9cm. The boxes contain the ~~sp~~ plant name and specimen number on the cover and box thus:



The inside of the box contains the following data, sometimes typewritten, sometimes ~~written~~: number plant name, notes by Lloyd about the species and the name and address of the person ~~an~~ from which the specimens were received. Data which came with the specimens such as slips with collectors numbers, herbarium numbers and labels, field notes etc are loose in the box.

with the specimens. The latter however are rare, showing that either the amateur collectors are not careful about such data or that it is <sup>is</sup> ~~now~~ too carefully preserved.

The boxes of specimens are piled together, an attempt being made to keep genera together more or less, but not ~~species~~ larger groups.

The user of the herbarium is at the mercy of Mr. Lloyd to find material, of which there are thousands of specimens ~~now~~ distributed thru two floors of the building. Similarly the books on his shelves are arranged after no discoverable order but Mr. Lloyd can easily find them. Neither books ~~of~~ of like size contents or of the same author are to be found together. Harshberger stands between Sprengel and a Swedish dictionary and between <sup>these</sup> Hartig & de Bary.

Schweinitz & Fung. Can. Sc. rept. naturp. ges.

Serpzig 1:32. 1822 states that Zuber virens is found rarely in pine woods, hope. Salisbury.

— Sgm Fung Nam. 2207.

states that Rhizopogon virens is found in Pennsylvania, also. In the same place he states that n. 2210 R. aestivus Fr is found on Mt. Pocono, Penn. R. albus found in Carolina only.

Albertini & Schweinitz. Compend Fung Musc  
1805

214. J. (Lub.) virens nobis + VIII f. 3.

J. mapus-diformis, filamentis in superficie sparsim decurrentibus, laxis, subreticulatum, extus rufis griseum vel sordide spadiceum, intus viridi cinerascens.

Differt ab antecedente 1, colore externo et praesertim interno constantissimo; 2, reticulo filamentoso; 3, difformitate eximia; statura ultra duplum ~~magis~~ majore, ut plurimum 2-3 unciali. His discriminibus innoxii fungum nostrum specie separandum duximus — in odorem ceterum



et insipidum ~~his discriminibus~~ polymorphum, diversi-  
 mode gibbosum, Tuber edule Solani adeo  
 mentientem ut vix ullus indeceptus discedat,  
 semio-fossum, arrhizum, ni fila supra  
 descripta, passim apicibus liberis ramosa,  
 radicularum vices subire aestimaveris. Uiarum  
 praesertim et haec species comes, sed magis  
 assidua praecedente. Item aestate et autumnus.  
 — An igitur species nostra cum *Sycoperdo*  
*aestivo* Wulfenii conjugenda? magnitudine  
 excepta parum obstare videtur: verum penes  
 peritiores esto iudicium.

see p. 66.

Sloyd Museum 87

The New York State College of Forestry - Syracuse, N. Y. Forest ~~Forest~~

*Melanogaster ambiguus* No 87. Locality Syracuse N.Y.

Date Oct 9, 1915 ... Nearly buried in black soil in  
 a woods road. <sup>[com]</sup> S. H. Pennington.

Fragments of *Rhizopogon* in the Sloyd Museum

Jan 3- , 1918

Sloyd Mus. 07866 GC Fisher 21 Florida

*rubescens*  
 1/2 fructification present. 1.6 X 2.2 cm, tawny  
 to near brown, peridium 115-120  $\mu$  diameters  
 simplex; fibrils scanty innate appressed  
 gleba ochraceous tawny; cavities subglobose  
 to labyrinthiform. septa hyaline 90  $\mu$  thick  
 somewhat scissile, composed of large gelatinizing  
 hyphae; basidia inconspicuous

spores almost fusiform

4 X 7.5 hyaline. "

Sloyd Museum 6179

*Rhizopogon rubescens* Taste Cooke collected  
 by Ellis in N. Jersey from NY Bot Gard.

1/2 fructification present 1.4 X 2.0 cm about  
 warm sepia; fibrils not discernible. peridium

gleba between cinnamon and snuff brown  
 cavities

0241 Sloyd Museum

*Hysterangium neglectum* cotype ex Massee  
"grayish"  
Tasmania: peridium wood brown gleba cinnamon

Sloyd Museum 7300 *R. diplophloeus*. Z + D  
Wn Dubsdorf 811 Washington. [*R. rubescens* Pat.]  
1/4 fructification present.  $1 \times \frac{1}{2} \times \frac{1}{2}$  so probably  
originally globose 1 cm in diam. mass brown  
fibrils scanty, immature darker; peridium duplex,  
375-400  $\mu$  thick, tawny, demarcation not pronounced  
gleba sayal brown in outer portion, bitter within  
cavities irregular, labyrinthiform, septa 70-80  
 $\mu$ , of closely interwoven hyphae  
basidia  
spores 7-8.  $\times$  3 hyaline or dilutely colored  
under the microscope.

Sloyd Museum 7298 *R. occidentalis* Z + D. ?  
Wn Dubsdorf 813 Wash. [*R. rubescens* Pat.]  
1/4 fructification present,  $1 \times 1 \times .5$  making the  
original  $1 \times 1 \times 2$ . cinnamon brown; fibrils  
dark reddish amber, anastomosing, small  
peridium scaling off in places. 140-160  $\mu$

gleba ochraceous buff fragile, cavities  
 labyrinthiform; septa  $70 \mu$  thick hyaline  
 not scissile; basidia clavate  
 many spored, spores  $10 \times 4 \mu$  slightly colored in  
 mass, almost hyaline under a microscope.

Sloyd Museum 64. *R. rubescens* var. *littidum*  
 64 American Botanical Exchange Bureau Geo. S. Fisher  
 901 Pease Ave, Houston Texas U.S.A.  
 Collected at Houston Texas U.S.A. <sup>Date</sup> Jan 1, 1917.  
 collector Geo. S. Fisher. on ground, fresh  
 but hard when gathered.

---

64. *Rhizopogon*. Unnamed I think. Very  
 interesting. Some day I will go over the  
*Rhizopogons* and publish them. This is quite  
 close to ~~our~~ but different from our *Rhizopogon*  
*rubescens*, our only common species.  
 Geo. S. Fisher, Houston Texas.

The specimen consists a single fructification  
 with a small fragment missing. It is subglobose  
 $1 \times 1.4 \times 1.4$ . color darker than bone brown

fibils scanty to fairly abundant, innate to  
nearly free concolorous, peridium

gleba light to warm buff, hard; cavities  
labyrinthiform winding; septa

*Hymenogaster lilacinus* ex Tul at Kew

But not same spores as he shows. These are  
strongly uneven strongly apiculate  $12 \times 32$  mostly  
 $12 \times 24$ . A tiny fragment

Sloyd Museum 2210. *Melanogaster rubescens*

Type material from Schweinitz Herb. 2210.

Schw. Syn Fung Am Bor. 2210 was collected  
on Mt. Pocono Pennsylvania. No description  
given as he refers it to *R. aestivus* Fr. Syst  
Myc 2:294, #4. 1823.

The specimen at Sloyds consists of two fragments  
one about  $\frac{1}{4}$  or less of a fruit body,  $1 \times .5 \times .5$  making  
the original probably subglobose 1 cm in diam  
The other is a tiny chip  $1 \times 3 \times 10$  mm. enclosed in  
a piece of waxed paper marked 2210 Schw.

color Prout's brown to almost black, fibrils  
 scanty, <sup>mostly sub-</sup>innate, anastomosing darker than  
 peridium, very small; peridium dark tawny, 140  
 thick composed of large colored interwoven hyphae  
 gleba hard, bony, ferruginous black and light  
 gray, resembling a fractured surface of *Rhizopogon*  
*diplophloeus*; cavities subglobose, filled with  
 spores in a gelatinous mass so that sometimes  
 spores are cut in two; The septa are hyaline  
 made up of large, gelatinizing hyphae thick  
 spores borne ~~on~~

spores smooth ellipsoid, olivaceous fairly  
 thick walled,  $9-10 \times 4-5$ .

Slod Museum 11446

1031 Washington's Flora Klickitat County  
 Dry soil in forest Falcon Valley 27 Oct 1909  
 Wilhelm H. Suksdorf.

Specimen consists of portion of fructification  
 pyriform  $1.5 \times 1.5 \times .5$ , Prout's brown.



Sloyd Museum *Hydnangium brunneolum* (Hx) 8/10

Martellia? under *Quercus agrifolia* H. L. Gardner  
#245 Berkeley Cal. Jan 7 1905. dirty white  
turning brown." - sent Mattiolo who endorsed  
it *Octaviania microsporus* Matt ad interim.

Sloyd Museum 1279.

Herb. Dr. & P. Paschke acc VII 1912.

[Rab.] 1279 *Rhizopogon rubescens* Tul...

Lundhurst Hampshire Oct. 1868 leg C. E. Broome

Odor nauseosus.

1279... (Rab. 1279). ♀ Lindau, Berlin.

Specimen consists of two much flattened  
fructifications, pyriform. 8x.9 and 4x.5 cm  
respectively.

Sloyd 0242 *Melanogaster variegatus* det. Mattirolo  
 Frustule from N Y Bot Garden now pasted on a sheet  
*Peckia insignis*. Dearness sent it to Ellis No 2490  
 "Rich chocolate brown when fresh, about the size  
 of a large marble gleba of dark areas filled with  
 brown spores spores  $3-4 \times 7-9$ . seems to have been  
 hypogaeal.

Sloyd Museum 2208

2208 "*Rhizopogon album*" type from  
 Schweinitz Herbarium. [from Carolina  
 probably.] [not a type for S. did not give a description.]

One fragment 3 mm in diam and 1 mm thick.  
 This is a *Rhizopogon* for the spores are  
 nearly colorless <sup>and some on xylem</sup>. The fragment does not show  
 peridium so that one can decide species from  
 that. It seems to be *intolus* or perhaps *sesters*

Sloyd Museum 1921

*Hysterangium stoloniferum* Tul spore  $2.6-6.8$   
 The gleba of an old specimen freshly cut is greenish  
 It turns brown on old cut. specimens This is a  
~~cut saw~~ Kmet Exsic from Franconia <sup>perid</sup> ~~perid~~ <sup>light yellowish</sup>  
 olive to yellowish-olive.

Melanogaster in Sloyd Museum

4. Ex herbario Dr. S. Hollos, Kecskenet Hungaria  
 melanogaster variegatus Inl Comit Krassó  
 - Sörény. Anna 1897. Juni 7.  
 Sloyd 6074

see p. 40 Sloyd 03709 contains Pat's label for  
 Kryptia Bondieri and Micros for Melano-  
 gaster variegatus from different places

Melanogaster ambiguus Sloyd det since '18  
 Sloyd 06643 Melanogaster variegatus  
 det Sloyd W R Quilfoyle Melbourne  
 Australia contains 1/2 fructification

Type of Rhizopogon cerebrinum Sloyd.  
 No 262 Date Oct 13, 1914. Loc. Prov. Mikawa  
 Japan Collected by A Yasuda  
 No 262. The fruit body yellowish. It raises  
 only its upper portion above the humus  
 spores globose or elliptic, smooth 3-4  $\mu$   
 in diameter. Note from Yasuda's letter  
 Dec 14, 1914.

262 Melanogaster. We have never worked on the  
 species of mycelium. Spores 2-

by line like *Rhynchospora* species. It is no  
species in my collection now.

Sloyd Museum 1331

Cryptogamic bolander to the post. of India  
Dehradun U.P. dated Nov. 8<sup>th</sup> 1902

Name *Melanogaster durissimus* Cooke

Quality similar to black Indian

Net about 7000 ft

No 14945 Recd from J H Russell sq. Indian  
Museum

Sloyd Museum 05915

Wartmann und Winter Schweizerische

Kryptogamen 720 *Melanogaster Bromelianus*

Bark in Tulazne Champ hypidnantes de

net 1843 Syn *M. variegatus* & *Bromelianus*

Tulazne hypidnantes 75. Campagne

Battini bei Molan (7 inf) in Leut-

Polyporus h. Prof Dr J. Müller.

from Pagschke

Sloyd 6164

*Melanogaster ambigua* teste Bresadola & Pitou  
702 Fungi of Idaho. Priest sake in old  
straw Aug 1901. Isolated by C V Piper.

Sloyd 07245

*Melanogaster ambigua* Mass. Fungi of the  
Botan. Mycological Club. May 10, 1907.  
reaching 2.5 cm long.

Sloyd Museum 05859

Fungi Bohemici *Anthra graveolens* Vitt  
Vysoký Chlumec ad. Delcany 28 VIII 1904  
leg + Bubak.

Sloyd Museum 05916

*Floragermanica* *Anthra graveolens*  
Eichen Pr Sachsen leg Joh. Kuntze  
Herbar. Dr O Pazschke Leipzig.

Sloyd Museum 05860

tunji Botomica - *Gautiera morchelliformis* is  
Tabor: in silva ad flumen suenae  
30.8.1904 Leg. F. B. K.

specimen consists of a single specimen  
globose about 2.5 cm in diameter between  
ochraceous tawny and buckthorn brown

Sloyd 08453

*Gautiera morchelliformis* Prof. Palomkard  
from the forest.

The fructifications pyriform 2½ cm  
color buckthorn brown.

Sloyd Museum 1757

*Gautiera morchelliformis*. This is exactly  
the same on comparison with European  
plant. I presume from description it is what  
Harkness called *Gautiera monilicola*. This is  
the first *Gautiera* I have ever seen from  
the United States Our mycogeography  
are very imperfectly known. Dr Crawford  
Claremont, Cal



No 1759 about ten inches under ground  
surface under oaks Claremont Mar 1, 1917  
Coll. Lois McClency Herbarium of Pomona  
College

Specimen consists of a single fructification  
3 cm in diam

Sloyd Museum 05861

Fungi Bohemici *Hysterangium clathroides*  
Sitt. Sabor in silvis abietinis 24X 1905.

Leg + Dubak

Sloyd Museum 5927

634 Flora of Washington, partly above ground  
Mount Paddock (Adams) at altitude of about  
2200 meters Wunsukadorf 10 Oct, 1931

Sloyd

164 *Hysterangium Phillipsii*

(= *R. violaceus*)

The Hymenogaster are fungi that mostly  
grow beneath the surface of the ground  
a few of them are partly emergent & in Europe  
the subject has been fairly well worked by the  
networkers in Europe, etc.

shopable and dependent monographs of them. In the mixed slides Harkness did a lot of work on the subject. The usual mycologist rarely sees them and the foreign species are practically unknown tho they no doubt occur in all countries tho not collected, for not observed.

The species *Mr. Umemura* send from Japan has small hyaline spores  $2\frac{1}{2} \times 4$  like the spores of a *Rhizoglyphus* It cannot be <sup>all of</sup> the European species all of which have large spores 10 mic or more. It seems to me to agree with Harkness account of *Hysterangium Phillipsii* tho of course all determinations made from descriptions are more or less doubtful. Harkness has a figure of *Hysterangium Phillipsii* showing fibrous rosetts not noted on the Japanese specimen, but they may have been broken off. The spores are also given  $2 \times 5$  which is narrower than in the Japanese but taken as a whole the description is 1/2

figure agree very well. J. Umemura  
Negoya Japan

Sloyd 06578

*Sycoperdonor scleroderma*. Golden yellowish  
brown when fresh. Some of this color comes off  
in the hand. Heavy growing on heap mould  
in the ground. Oct 1906 Nassau N.Y.  
Bahamas." 06578 *Hymenogaster* (?) J. K.  
Brace. Bahamas.

*melanogaster variegatus*  
Sloyd 05348 Rev. J. Rick Portugal

Sloyd 04146 *Hymenogaster klotzschii* Tul  
Hort. Berol. in oasis *Eucalyptus*  
April 1904. P. Hennings.

single fruitification .5 cm or less in diam  
pale yellow.

Sloyd 06150

County of Follett 29/10 1905  
In sandy soil J. M. Reader Victoria Australia  
single oblong fruitification about 3 cm long  
1/4 cm in diameter fibrils fine many

forming a colorless beard. 1 or more long

Sloyd 5339

*Oclaviania asterospora* Montmorency  
from Bondieu - from Hollos

Sloyd 6395

*Hydnangium sodderströmi* Pat  
Ecuador fruit leg of Sagerheim.

"This is probably a cotype the species  
is characterized by a very thin peridium  
spores are globose 14-16 mic and roughly  
asperate

The largest fructification of the collection  
is 3.5 X 2 X 1.5 now in 5, 17/19.

Sloyd 5340

*Hydnangium monosporum* Bond. & Pat  
Nice must Barla from Bondieu France

"This is past Zalesne and was raised  
by Bondier and Piloniuk. " and  
spores on sandia but have no color  
spored (the spores are - obo - with a

strong apiculus and very finely asperate  
From Bondier France

Fructification 1.5 cm in diameter

Lloyd Museum 5981

Ochroma in pine woods Auburn Alabama  
12/9, 1900 J.S. Carle

Lloyd Museum 657

65 American Botanical Exchange Bureau  
J.S. Fisher 901 Pease Cove Houston Texas 48  
collected at Houston Texas 48.

Jan 1, 1917 Collector J.S. Fisher  
on ground, fresh but hard when collected.

65 *Hymenogonium Ravenelii* (Fr.) Myc Notes page  
367 At first I doubted this as spores are not  
so strongly stipulate but on comparison  
I concluded it could not be any other.

Fructification 1.5 cm long stream

Lloyd Museum 592

*Hymenogonium Ravenelii* notate with spores

Sloyd Museum 10620

No 12 Sandy soil Florida of J. H. Fisher  
*Hydnangium Ruvenelii*

Sloyd Museum 06025

51 *Hydnangium inter-carneum* Bres  
 primum sub *Polyzaccum*

"We label this as received it's we have  
 never published We doubt it being a

"*Hydnangium* as "Leske's *Leskei*. I guess  
 Rick was closer when he called it *Polyzaccum*

The spores are not arranged as a ring  
 and I see no asci and to the eye the  
 gleba is not that of *Hydnangium*.

[published Ann Myc 18:54. 1920 probably type]

Sloyd Museum 04147

*Hydnangium carneum* L.

Hot Bird in vasis tepidarium

(Plantae ex Nov. Holland April 1834)

P. Hennings.

spores globose strongly up to 10 microns  
 plainly seen with no staining



as sp. on this is very much the same  
as *Oetwiania asterosperma*.

Sloyd Museum 6039

1) *Hydnangium carneum* W. L. L.  
Sud de la France ex Herb. M. Patouillard.

Sloyd Museum 11153

*Hydnangium australiense* OK.

I have no doubt of it from Berkeley's description which agrees exactly. It is close to *Hydnangium carneum* but differs in smaller spores which are 10-12 mic. probose cupule and minutely rough.

Miss E. J. Turner South of Uca <sup>Australia</sup> ~~South Africa~~

Sloyd Museum 12127 Type of *H. pallidum*

*H. inangium* probably unnamed  
It is close to *H. Soderstromii* (see my spec.) but different context and slightly different spores. Rio de Mula, Ecuador.

Collection consists of a number of fruiting  
bearing 2 1/2 cm piriform, the peridium

peridium disappearing so that it looks like  
a gasteroidea.

Lloyd Museum 11

Hydnangium The sp. is have never  
seen worked out I do not know this one  
think it is immature. The spores are  
globose dark rough & seem to be undig-  
ested. I think neither on *Saxifraga* or  
*asci*. C C B. Allerton Melbourne Australia

Lloyd Museum 5728

651 Flora of Washington partly above  
ground W. Kuckelst Co. near former PO  
W. N. Kuckelst 13 Oct 1901

Lloyd Museum 5726

633 Flora of Washington southern slope  
of Mt. Pardo (Adams) at a top about 700 miles  
W. N. Kuckelst 13 Oct 1901

Sloyd Museum ~~632~~ 5925

632 Flora of Washington On very light soil  
partly above ground in open pine woods  
lumber, Falcon Valley Wn subsdop 8 Oct 1901

Sloyd Museum 046

*Hydnangium carotaecolor* Berk  
dans un pâturage à Bassesourt, Jura bernois  
D'un beau rouge-orange carotte 18 septembre  
1920 *Hymenium concolor* Sa tranche incluse  
provient d'un exemplaire gros comme ceci:  
sommet émergeant



drying



enfoui à quelques  
centimètres sous terre le  
sommet émergeant.  
[Paul Kourad, Switzerland]  
see Sloyd Myc notes  
peridium tawny, gleba  
antimony yellow

*Tuber virens* A & S.

Sloyd collected a plant with a "greenish yellow gleba when fresh" near Upsala. Fries did not recognize the plant as *virens* for he says that it is a smaller, more irregular plant than *luteolus*. The characters Fr + Nordh give *luteolus* are very ~~probably~~ like those of the Sloyd collection and the Schwernitz picture. It seems quite possible that *virens* is a north European species and that Fr + N and Fr. *luteolus* should be included as synonyms leaving *R. luteolus* Tul not Fr + N as a distinct species of S. Europe, with both species meeting in Germany. Probably the *viridescens* of Karsten should be a synonym of *R. virens* (A & S) Fr. Sloyd in a conversation was of a similar opinion

see this notebook p. 44.

character

*R. virens**R. luteolus*

size

1.5-2. cm

color

p. thickness

p. structure

p. color

"greenish yellow fresh"

g. color

s. thickness

s. structure

basidia shape

size

sterigmata

spores size

color.


Study *Peckia* sp. on *Rhizopogon violaceus*  
from Lloyd Museum 164. collected by J. Umemura  
Negoya, Japan.

### The Mystery of Ellis 943.

A certain box in the New York Botanical  
Garden, evidently the box from which  
Ellis North American Fungi 943 was issued.

The contents of the box are as follows:

No 175 in red ink on inside cover, box  
and a small envelope which bears the  
superscription as follows:

*Melanogaster rubescens* / sec. spec. det. by  
Cooke / from S. J. Harkness / Amherst, Mass.  
Oct. 79 / spores narrow elliptic / or obl.  
0003 - 0004 / X 000125 basidia / broad  
ovate 

Also a note also in Ellis' hand

*Hymenogaster* tough almost like sponge not  
easily torn apart. perid. roughish subsquamulose.  
at first becoming smooth, color dirty-yellow drab



color of interior dark cinereous becoming brown in decay, cells ~~off~~ empty even at first. smell of the <sup>decaying</sup> spec. something like that of fresh maple bark (*Acer rubrum*) smell of fresh spec. not distinct. Young peridium purplish when cut — mycelium <sup>comparing</sup> rootlike white becoming yellowish. <sup>[in pencil]</sup> one spec. found in an old wood path on the west end of my lot at Newfield Oct 3, 1875 outer membrane reddish especially around the base.

Another small envelope No 175 bearing the superscription "Newfield ~~Nov.~~ Nov. 1879" contains a slip with the following:

*Hymenogaster* — smooth, dirty yellow, solitary or ~~caespitose~~ caespitose, irregular, globose often compressed vertically when caespitose — ~~with~~ scanty white root-like mycelium at base (over)

the fibres of the mycelium extending up & spreading over the lower half of the peridium — on the ground in an old abandoned road in low pine woods Newfield Nov. 10, 74 / spores obl. - elliptic about 0005 long

The envelope also contains a smaller with

the superscription "Newfield. N.J. Sept 20, 1880.

The cover contains the following labels pasted in  
 "Octaviania Stevensii Berk/var Ravenelii B+C  
 see Rav. F. Am. Cent 1. / Rhizopogon rubescens Tul/  
 fide Sacc."

[printed] Ellis North American Fungi

943 Rhizopogon rubescens Tul / on the ground in  
~~in the forest in~~ sandy pine woods / Iona, N.J. 1882 / Capt Geo. H. Copp.

Other specimens of *R. rubescens* from the Ellis Herbar.

- "Rhizopogon rubescens Tul / fide Saccardo /  
 on sandy ground / Newfield, N. Jersey / Nov 1881.  
 spor. 6-9 X 3 / larger than in the 1873 spec<sup>t</sup> the  
 Texas spec but agreeing with Berkeley's measurement<sup>ment</sup>"
- "Rhizopogon rubescens Tul / see Rav. Car. 1. 75  
 from Texas Aug. 1875 / com. Mrs M J Young /  
 spor. oblong 5-7 X 2-2½  $\mu$  / 2 nucleate."

'P. *Hysterangium neglectum* Rodway Type<sup>ee</sup>  
 It is a *Melanogaster* —  
 a few fragments of gleba no peridium<sup>ntly</sup>

*Hysterangium stoloniferum*  
 var *americanum* type materials  
 Conglen Ithaca N.Y.  
 4 Feb. patrick spring 1912  
 N.Y. State Coll. Agr. Cornell 8448.  
 — 1 fructification

*Hysterangium Thwaitesii* Type  
 — a few fragments no peridium

194 *Hysterangium rubricatum*  
 ex Hesse. Prof. Matterolo Italy

083 *Hysterangium membranaceum*  
 S. Rodway Hobart Tasmania

0241 *Hysterangium neglectum* <sup>cotype</sup> ex Hesse  
 Tasmania

*Hydnangium australiensis* type  
 a few gleba fragments

6392 *Arcangelulla Borziana*  
 Cotype The genus is *Hydnangium*  
 with veins — Cavara Italy

Erbs Critt 9t. (1052)  
*Oclaviuma mollis* Italy

'Pine and ground squirrels, are very fond of these subterranean fungi and may be ~~seen~~ seen seeking for them in the early morning, apparently they are a much desired delicacy. This affords the collector a means of procuring specimens. When a squirrel is seen ~~in~~ in the early morning, with a round nodule in his mouth, it is, in my experience, a sure sign that he has one of these fungi. Give chase and frighten the animal and the fungus is usually dropped. This is the method by which I have procured every specimen I have."

— James R. Weir in a letter to S M Zeller  
Feb 6, 1918.

## Collation of Trog. and Otth.

Trog, f. G. (den. in Thun) apotheker

Verzeichniss schweizerischer Schwämme,  
welche grössentheils in der Umgebung von Thun  
gesammelt worden sind. Mittheilungen der  
naturforschenden gesellschaft in Bern.

1843: 17-92. 1843 [ # 15-23 ]

Nachtrag zudem in Nr. 15-23 der Mittheilungen  
enthaltenen Verzeichniss schweizerischer Schwämme

Ibid. 1846: 73-81. 1846. [ # 66, 67. ]

zweiter Nachtrag ... Ibid 1850: 49-56. 1850 [ in # 173 ]

dritter Nachtrag ... Ibid 1857: 25-47. 1857. [ # 388-390 ]

Otth, G

viierter Nachtrag ... Ibid 1863: 70-90. 1863. [ in # 538-542 ]

fünfter Nachtrag ... Ibid 1865: 155-181. 1865. [ in # 599-602 ]

sechster Nachtrag ... Ibid 1868: 37-70. 1868. [ in # 658-662. ]

siebenter Nachtrag ... Ibid 1870: 88-115. 1870. [ in # 722-726 ]

Nov 18, 1918. Last number used 955.  
 #1001 to 1248 have been used  
 #1-500 reserved for lichen herbarium  
 unnumbered as yet.

Questions for trip to Farlow Herb.

*Rhizopogon* — Authentic material

*luteolus* F. & Nord

*provincialis* Tul. seen type locality

*graveolens* Vitt. Notiz nate cu: sulla Sombardua

1:34/1. 1844 (Milano). also *H. vulgaris* <sup>rub.</sup> Vitt

*induratus* Cooke

*violaceus* Chet Massee — Kirk 382 in Kew.

*Rodwayi* MacAlpine

*suavis* Quellet (Jura Vosges region)

*lapponicus* Karsten Isl. Rensala near Åbo & Knäsa-

(Guba in S. Russian Lapponia)

*borealis* Karst. Ulaburg H. & Zidbäck

*viridescens* Karst. or *viridis* Karst. Syrföas near Mur

*Webbii* Tul. — Chasna, Canaries.

*piceus* B+C Hong Kong China.

*viridis* see this notebook p. 66.

*albus* Tangle



*Gautieria*. Authentic material

*graveolens* - mexicana Chatin - Fischer

*Irabute* (Chatin) Pat. Algeria

*Othii* Trog examine all Swiss *graveolens*  
material - Hardiesberg.

*Drummondii* Cooke.

*Chamonixia caespitosa* Rolland - sub *Abies*  
*excelsa* Bois du Bouchet. near Chamonix.

!! *Gymnomyces* Masse & Rodway.

! *Seucogaster* Hesse, Mattiolo - Burt spec.

{ *Hydnangium*  
*Octaviania* }

! *Arcangellicella* Cavara?

! *Sclerogaster*

*Melanogaster* Corda

*Hyperrhiza* Bosc - Carolina - Charlestown

*Hysterangium*

*Hymenogaster*.

!! *Macowania* Berk.

*Anthracophloeus rhyzopogonoides* Matt. was it ever published and where.

Nov 23, 1918. Trip to Farlow Herb.

Has Hesse collections 1903.

✓ *Hym. decorus* Tul Eisenach 1892

✓ *tener* Berk. Caldern 1901

✓ *R. provincialis* Tul. Altmark 1899.

✓ *Hysterangium clathroides* Altmorschen 1900

✓ var. *Utt.* *S. u. hof* 1900

✓ *Octaviania asterosperma* var Rasburg 1901

✓ " " Utt Altmorschen 1901

✓ " *lutea* Hesse Altmorschen 1899

✓ " *brunnea* Hesse Altmorschen 1899.

✓ *lanigera* Hesse? Altmorschen 1899.

*Senecogaster floccosus* Hesse Kirchain 1902.

✓ *Melanogaster variegatus* Tul Spiegelslust 1901.

*Hysterangium rubricatum* Hesse

*Melanogaster variegatus* Tul -

*Octaviania asterosperma* Utt.

*R. luteolus* (Fr) Tul Altmare 1900

*R. virens* Fr Gilbe 1900.

*Senecogaster floccosus* Hesse Kurchan 1902

Fructifications small, <sup>1 x 1/2 x 1/2</sup> pyriform day to  
 auburn preserved in alcohol, 1918; peridium  
 with thick flocculent concolorous patches. 120-  
 150  $\mu$  of fine hyphae, <sup>the so-called the concolorous</sup> <sup>at the base of the</sup> <sup>structure</sup>  
 fibrils loose, round black or nearly so. gleba darker  
 waxy in alcohol moderately abundant  
 septa transparent under microscope composed  
 of large closely woven trahyaline hyphae  
 basidia linear  $\text{V}$  2-3 spored (?).  $7 \times 12 \mu$   
 spores typical of genus clear space  $4 \mu$   
 to outside of gelatinous sheath  $7 \mu$  in diameter  
 occasionally reaching  $10 \mu$

septum  $\pm 100 \mu$

spores

with slight



seems to be verrucose  
 reticulations

*Octaviania lanigera* Hesse Altmorschen 1899

Fructifications  $2.5 \times 2. \times 2.$  reniform

Fibrils snow white, small, scanty,

Peridium white. cottony spotted with tawny ochraceous

spots <sup>130  $\mu$  diam.</sup> <sup>40  $\mu$  diam.</sup> <sup>10  $\mu$  diam.</sup> <sup>5  $\mu$  diam.</sup>  
gleba tawny to russet which on closer examination shows that the septa are white like the peridium and the cavities are lined with the tawny spores.



spores  $2-3 \mu$  long heavy <sup>10  $\mu$  diam.</sup>

Peridium <sup>100-150  $\mu$  diam.</sup>

*Octaviania brunnea.*

Collection of five tiny fructifications the largest about .8 cm  $\bigcirc$  appearing almost black in the alcohol. surface mealy, very dark brown under the microscope peridium  $\approx 3 \mu$  thick of dark brown  $\approx$  knitted closely woven hyphae.

fibrils very inconspicuous, if present, not seen.

basidia  $\approx 2 \mu$  diam. 2 spored.  $\approx 3-4 \mu$  long  
 diameter spores  $\approx 3-4 \mu$  long  
 $\approx 20 \mu$  in diameter wall  $4-5 \mu$  thick

hyphae of very fine closely woven network  
 hyphae.  $30-40 \mu$  diam.

*Octaviania lutea* Hesse. Altmorschen 1899.

Collection of seven large fruit bodies reaching  $2\frac{1}{2}$  cm in diameter irregular probably gregarious or caespitose.

Peridium smooth or roughened by a tendency to crack off in places, whitish background with large auburn to chestnut to Mars brown patches. Spores of large size, elliptical, hyaline, smooth, with a thin wall of brownish chestnut color. The thick, the thin, is a little and more, more, more.

Basidia 2-4 spores.

Spores 10-14  $\mu$ m diam. elliptical, 1-1.5  $\mu$ m long, smooth, hyaline, with a thin wall of brownish chestnut color. The thick, the thin, is a little and more, more, more.

Spores 10-14  $\mu$ m diam.



*Hymenogaster*

*Hymenogaster* (Sundberg)  
var *Mexicanus* Farlow & Zipp

*Rhizopogon* *conva* *texensis*

Gilkey Recd Feb 1892 probably from  
the *gracilis* = *R. pannosus* probably but not studied

*R. luteolus* N. E. Georger. *virgatus* Koca

*R. rubescens* Waltham mae

" *Barnbridge* Ala Dec. 1892

*Hydnangium carneum* green herbarium

June 1892

*Hysterangium* under *sp. mac* *sp. mac*

June. *Flaxter*,

Jan 25, 1919. Received ~~the~~ proof of  
 Arcangelhella, Gymnomycetes & Macowamites  
 from Zeller. He states in a penciled note  
 that Hymenogaster caudatus<sup>Harkn</sup> becomes  
Gautieria caudata (Harkn) Z+D when pub.  
 see Zeller letter of Jan 6.

Dodge 1249 portion of type of Arcangel-  
 ella caudata Z+D.

March 21, 1919. Received 4 collections  
 from Mary Strong Clemens, 412 Park Ave  
 Pacific Grove, Cal. Numbered as follows:

- |     |   |   |
|-----|---|---|
| 955 | Lycoperdon sp.                            | Jan 1919<br>These two collections<br>loose in box with<br>note that 2 spp were<br>under same label.<br>7x12 |
| 957 | Rhizopogon <u>occidentalis</u>            |   |
| 958 | Lycoperdon sp. (young?)                   |   |
| 959 | Rhizopogon <u>occidentalis</u> Z+D Feb 15 |   |

June 14, 1919 Received 2 collections from  
 Mary Strong Clemens.

960 Polystictus versicolor

961 a tiny fructification from sand dunes  
 probably discomycetous.

collected a discomycete on Rosa stems.  
962 and 963.

Aug 1, 1919 Trip Collected numbers. 964 - 1000, <sup>1250-</sup>1260

Climbed east face of Tadmor hill, finding only a few. *Russula* abundant on top and north side of hill, a single collection of *melanogaster* on north side of hill growing on earth in close proximity to roots of *Betula* stump. a true *Poria* found with raised lemon colored edges and a smoky hymenium, some of the pores as in



accompanying drawing. The presence of <sup>old</sup> *Stereum* spp with hymenium in usual direction showed that the log had not been moved for over a year

Try to get a fresh specimen later and see if it has any geotropic relations in culture.

*Hydnum* sp. 1252 also found, a small number of discomycetes. *Fomes applanatus* was abundant with large quantities of the brown spores on the upper side. This would be good for a study of spore dispersal. Some *Clavariaceae* seen, also per

haps, *Tremellodendron* or *Craterellus*.

Aug 15, 1919. #1261. collected by W. W. Dodge  
in cornfield. Fructification obovate  
peridium rough with raised patches  
of outer layer (?) inner layer white and  
cottony where cut, sterile base not pro-  
nounced. gleba next peridium pale



chalked <sup>long yellow</sup>, becoming vinaceous  
slate in center. Cavities  
almost cat coal black, seem-  
ingly full. cavities toward peridium  
empty. fibrils and columella absent.

Aug 25, 1919. #1262 - *Sepiota*  
photographed in situ. same date  
#1263 *Cantharellus*

This specimen seems to be *C. floccosus* Schw  
as defined in *Murrill Nam* <sup>u</sup> #9: 168-169, 1910.

It agrees with *C. princeps* Berk as given by  
Saccardo *Syll Fung* 2: 487. 1887. but less well with  
his interpretation of *C. floccosus*. What is to be inter-  
preted as *C. aurantiacus*? see illustration in

Berk. Outl Brit Fungol. pl.

#1264 *Amanitopsis nivalis* (Grev) Sacc <sup>Based on Peck</sup>  
 This seems to be Murrill's interpretation of  
*Agaricus (Amanitopsis) nivalis* Peck Ann Rept  
 NY State Mus 33:48. 1883. see Murr. Mam Fl  
 10: 67. 1914. see also Atkinson's *A. albocreat*  
 Jour. myc 8: III. 1902. However the stipe is  
 not hollow, but Sacc who made a n. comb.  
 on the basis of Peck's description, does not  
 mention the fact. He connects Peck's paper with  
*A. nivalis* of Grev. Scot Crypt Fl pl. 18  
 a portion of which is quoted by Berk  
 in Smiths Eng Fl. 5<sup>2</sup>: 3. 1836 which states  
 Stem 3-5 in high, 3-4 lines thick naked  
stuffed with spongy fibres, bulbous at the  
 base, with a constriction where the volva  
 becomes free. Fr. considers this as a  
 white var of *A. vaginata* of which  
 Saccardo's forma b. Tota alba might  
 fit.

Aug 27, 1919. #1265 - 1297.

Trip over Tadmer Hill. Hydnaceae, abundant, more different families less species. Rain for three days previous.

#1268 and 1269 *Hydnum coraloides* and *Hydnum caputursi* resp. were growing on the ends of the <sup>same</sup> log or rather near the ends, along the sides.

Sept 4 1919. #1298 - 1300

Sept 5, 1919 #1301 - 1316

Second clear day in two weeks, collected on road west of Tadmer swamp.

#1311 several ~~sp~~ fructifications, margin appendiculate. Below is drawing, shaded areas represent water soaked cartilaginous tissue. stipe stuffed mealy without, bulbous but with no sign of volva, annulus not present but lo-



natural size but stipe narrower. cation shown by absence of mealy scales above a definite line around the stipe.



Sept 27, 1919 # 1328 - 1346

Oct 3, 1919 # 1347 - 1354

Oct 10, 1919 # 1356 - 1387

## Hymenogastreae in Brown Univ Herb.

*Hysterangium nephriticum* Berk  
near Bristol 2/-45 (penciled 305)

*Hymenogaster citrinus* Bedminster Down  
Septem<sup>r</sup> 25, 45 near Bristol (penciled 309)

*Hymenogaster luteus* Anglia ex Berk  
(Olney's writing)

*H. luteus* Valtadini Wiltshire.

*Hymenogaster olivaceus* Vitt ? near Bristol  
9/11 - 45. (a possible type of *H. olivaceus carmodestus* B+C  
collected at Hartham Park autumn 1845)

*Hymenogaster tener* Berk n<sup>r</sup> Bristol  
10/14 - 47

*Hydnangium carotacolor* Seighwood  
near Bristol 1846 (penciled 310)

*Hydnangium Ravenelii* B+C in terra  
Car. austr.

*Hydnangium Stephensii* near Bristol 1844

*Rhizopogon rubescens* Tul in terra  
Car austr

*Rhizopogon luteolus* Tul in terra  
Car austr.

*Rhizopogon rubescens* Zulasne

Devonshire 10/-45 (pencil 311)

*Hymenogaster* ? near Bristol 1847

*Octaviania compacta* Zulasne near

Rome October 1846. pencil 56

Notes on the plates of Vittadini, Mon.  
Zub 1831. (Ms Bot Gard. Copy).

# Plate I

- 1A peridium Verona brown, cavities  
cacao brown but more dilute
- 1B peridium between Russet & Mars brown
- 2C " cinnamon rufous to chestnut  
brown. 2D cavities cinnamon
- 3E peridium vinaceous cinnamon & darker
- 3F cavities bister
- 4G isabella color & darker 4H cavities  
sage brown tinged with pomegranate  
purple.
- 5I black with warm sepi markings  
K cavities a mixture of above colors.
- 6L olivaceous lightly washed over black  
M & N the same or darker
- 7O orange cinnamon & darker
- 7P cavities Sudan brown
- 8Q black lightly washed with bister
- 8R cavities lightly washed with Mars brown

- Plate II 1A between russet & cinnamon brown  
 1B cavities light buckthorn brown  
 2 cavities same but lighter peridium  
 Dresden brown  
 3 aniline black cavities  
 4C Darker than olivaceous black  
 4D cavities between ochraceous tawny & cin-  
 namon brown.  
 5E cavities russet 5F peridium light  
 pinkish cinnamon or lighter  
 6G lightly washed with light buff  
 6H ochraceous tawny  
 7 practically black & white  
 8 R lightly washed with ochraceous  
 Tawny  
 9S peridium washed with antimony  
 yellow.  
 10U. cavities russet. 10V washed w. tawny

- Plate III 1A Mars brown 1b cavities  
lightly washed with chestnut brown  
2c buff yellow to baryta yellow.  
2D cavities bister septa baryta yellow  
3 E & F washed with sooty black.  
4 peridium cinnamon brown  
cavities black, sept baryta yellow  
5 washed with bister  
6 washed with russet  
7 cavities Mars brown  
8 peridium bister  
9 cavities prunelae yellow  
10 M auburn N cavities very lightly  
washed with auburn  
11 bister  
12 between pecan brown & roods brown  
13 lightly washed cavities pinkish buff.  
14 S warm buff 16 T. between tawny & russet  
17 russet  
18 Mars brown  
19 Saccardo's olive  
20 Mummy brown



- Plate IV 1A+B Vandyke red to Hays Maroon  
 2C light buff. 2D light yellowish olive  
 2E lightly washed with light buff  
 3G tawny 3H deep quaker drab  
 4L zinc orange<sup>M</sup> interior deep quaker drab  
 4N between vinaceous- & olive-buff.  
 5O peridium dark olive within citrine  
 drab. P dark olive  
 6a Tawny 6R dark quaker drab.  
 7 tawny & black  
 8 light buff  
 9B cav. <sup>light</sup> ochraceous buff  
 10c ochraceous salmon, spores Prout's brown  
 11D " buff spores Mars brown  
 12E peridium mikado brown cav. warm sepia  
 13F washed with orange cinnamon  
 15 interior dark olive buff.  
 16 Peridium Dresden brown  
 17 Wood brown & black  
 18M drab with deep grayish olive center

Plate V not colored.

Becker, S. Schlesiens untererdische Pilz Flora  
 Natur 35: 355. 1986.

3. *Hymenogaster? campester* m. am  
 18 Mai 1873 zu Pilsnitz bei Breslau, in  
 freiem, strauchlosen Sande, am  
 Rande eines Bachleins, in der Nähe  
 einer faulenden Baumwurzel und  
 der Wurzel von *Symphitum officinale*  
 1-2" tief: Größe der Erbse bis 1/2 Hasel-  
 nuß. Haut dunkelrothbraun; Schnitt-  
 fläche nach dem Trocknen rothkaffee-  
 braun, wie körnig. Derb beim Schneiden  
 Geruch penetrant morchelartig; nach  
 Anderen: pilzartig. Sporen verschumpft  
 zusammen mit *Choeromyces? campester*  
 m. Von Winter, welchem Scheibchen  
 zugehören, in seiner Flora nicht be-  
 rücksichtigt.

page 356.

5. *Octaviania Silesiaca* n. am 2 Juni  
 1873 in den Keßbergen bei Hermannsdorf  
 (Jauer) unter dichtem Moose, in der

Nähe von und unter Weisstannen-Wurzeln  
Größe der Haselnuß; gelblich, in trockenen  
Zustande bräunlichgelb werdend, derb  
zäh, pilzartig reichend. Schnittfläche  
erst weiß, später weiß und bräunlich  
gelb marmorirt. Sporen vollkommen  
kugelig und warzig. Zusammen mit  
*Hysterangium clathroides* und etc.

7 *Octaviania*? *Gautieria*? *pityophila*  
m. Mit M 5, 6 und 8 zusammen am  
2 Juni 1873 unter Moos und Weisstannen.  
Derb, nach dem Trocknen monoton  
chamottefarbig; wie auch das Äußere  
nur daß dieses unrein chamottefarbig  
ist. Schnittfläche weite leere gewundene  
Räume zeigend.

~~the~~ *Phlyctospora sclerodermoides* Clements<sup>1922</sup>  
 Subterranean, depressed globose, nearly  
 smooth, brown; peridium thick, coriaceous  
 radicate, gleba firm, chestnut colored  
 spores crowded, globose, brown, covered  
 with more or less reticulate papilla  
 which are  $2\frac{1}{2} + 3\frac{1}{2} \mu$  long, involved  
 in an indefinite hyaline mucous<sup>u</sup>,  
 $18-25 \mu$  in diameter.

Peridium  $3\frac{1}{2}$  cm wide by  $2\frac{1}{2}$  cm. high  
 In cultivated soil Lincoln (4204).

University of Nebraska Botanical  
 Survey of Nebraska conducted by the  
 botanical seminar. III. Report for  
 1893. Lincoln Nebraska published  
 by the Seminar 1894 (distributed  
 June 18, 1894. page 12. no fig.

237 *Hysterangium australe* Speg. n. sp.

Diag Odor fortis, nauseosus, fungino-terreus, suberosus. Uterus primo subglobosus dein ob terra pressionem irregulariter compressus, varie gibbore expansus magnitudine ludens (5-10" diam.), basi manifesta nulla, fibulis radicalibus perfecte destitutus, albus, levissimus, glaberrimus, peridio tenui a pulpa non v. difficile secedente, carne autem pallide fulvo-olivascens, tremelloides subceracea, tubulis numerosis, minutissimis undique irregulariter percursum tubuli graciles (150-250 diam.), varie elongatis, vacuis, parietibus sporiferis cinnamomeis; sporae elliptico-elongatae sursum plus minusve attenuato-rotundatae, deorsum acute attenuato-cuneatae basique truncatae, episporio ubique majusculis undulato-subvernuculo saturate olivaceo-fuligineae, protoplasmae grosse granuloso farctae v. l-quittulatae (15-20 X 8-10) stipite longius-

culo, gracili hyalino monospermofultae

Species primo intuitu pro Tubere  
australi Speg. facile sumenda,  
odore tamen, ac sub sectione caeteris  
characteribus mox distinguenda.

Characteribus externis nec non  
vegetationis perscrutatis, dubiose  
haere an hic fungus Tuberiaustralis  
Speg. statum stylosporium sistat  
an tubera ascigera sphaerocarum  
more statos metageneticos possident?

Hab Ad terram plus minusve profunde  
delitescens sub muscis hepaticisque  
en la Boca de Riachuelo Maj et  
Juli 1881.

Spezzazzini, Carlo, Fungi Argentini  
additis novis illis brasiliensibus  
montevideensibusque. 4: 94. 1881. (Anal  
Soc Cient Arg 11: 1881.



270. *Hysterangium Marchii* Bres. n. sp. Tab <sup>CCXI f. 2</sup>  
*Epigeum* vel *semihypogaeum*; *subglotum*  
 vel hinc et illinc depressum, basi radice  
 mycelialibus crassiusculis instructum  
 2-3½ cm diam; peridium membranaceum  
 facile separabile, luride alutaceo-sub-  
 umbrinum, tactu rubescens, sub-  
 glaber, mox in squamulas secedens  
 gleba cartilaginea, ex albo olivacea,  
 cellulis vacuis, multiformibus instructa  
 sporae obovato oblongae, pallide  
 olivaceae biguttulatae 7-10 × 4-5 mm  
 basidia clavata 30-35 × 8-10 mm  
 contextus peridii ex hyphis ramosis  
 luride luteis granuloso-farctis  
 5-8 mm latis; contextus glebae  
 ex hyphis hyalinis, 3-4 mm lato  
 radice ex cuticula procedente  
 ex hyphis septatis conflatae  
 Autumno in pinetis «Verla» pr  
 tridentum semel abunde obvium  
 Explicatio tabulae CCXI f. II  
 1-2 Specimina bene evoluta. 3 Sectio

perpendicularis speciminis junioris  
 4 Id. speciminis maturi 5 Sectio  
 pendii et glebae. 5p Sectio pendii  
 5g Sectio glebae 6 Basidia 7 spores

! Species haec primo legit et com-  
 municavit egregius magister I. Mordt  
 entomologus expertissimus, cui sine  
 meritoque dicata.

Bresadola Fungi tridentini 2:99-  
 100. 1900. [fase XIV Sept 1900.

### Beiträge zur Mycologie von Dr H F Bonorden

1. *Hymenogaster flavidus* Bonorden  
 utero varis, plerumque globoso, tenui  
 papyraceo molli impolito et radicato  
 primum maculis roseis albidisque  
 variegato, demum fusco flavido; spors  
 oblongis albis minimis.

Diese neue Art des *Hymenogaster* fand  
 ich in der Ebene bei Heidelberg in  
 Schwetzingen Walde Die Oberfläche  
 des meist rundlichen, selten oben

zugespitzten Pilzes ist etwas uneben in der Jugend hellgelb und an der Basis mit rosenrothen und weislichen Flecken versehen Wenn diese Flecke bei jungen Exemplaren fehlen, so entstehen sie doch bald wenn der Pilz, welcher nur mit seiner oberen Hälfte aus dem Boden hervorragt mit der Luft einige Zeit in Berührung gewesen ist. Reif ist der Pilz dunkelgelb. An seiner Basis ist er mit einer einfachen spindelförmigen Wurzel versehen.

Die Membran des Uterus besteht aus ästigen articulirten und anastomosirenden Zellen, welche bei dem jungen Pilz sehr weich sind und daher leicht bei der Untersuchung unkenntlich werden. Das Mark des Pilzes, mit dem Uterus fest verbunden ist weich, weiß, körnig und mit kleinen unregelmäßig geformten Söculamenten versehen, diese sind mit

Basidien ausgekleidet; es besteht aus kurzen, articulirten, nicht selten bauchigen Zellen, die sich nach dem Hymenium hin kurz verästeln und in ovalrunde Basiden endigen, welche die oblongen weissen Sporen ungestielt entwickeln. Die Socalamente sind kleine Höhlungen der Substanz von unregelmässiger, meist langlicher gebogener Form, in feinem Schnitt kann man sie mit unbewaffnetem Auge erkennen sie geben dem Mark ein ~~hörniges~~ zelliges Aussehen.

Hedwigia 15<sup>(4)</sup> 49. 1876.

## II Hydnum Pila n sp.

Globuleux, plus ou moins bosselé déprimé en dessous, blanc puis roux a l'air deux ou trois centimètres de diamètre.

Peridium continu, sauf à la partie inférieure qui est perforée et lacuneuse pubérulent par des poils incolores, serres

cylindracés, simples et obtus ( $\pm 30-40 \mu$ )  
à trame dense et tenace, très facilement  
séparable de la gleba.

Mycelium blanc, fibuleux, peu développé

Gleba ferme, blanche puis rouss-  
âtre, creusée dans toute son étendue  
de cavités très petites, ordes sinuées  
toutes sensiblement égales Base  
sterile nulle.

Cloisons formes de filaments grêles  
et cylindriques, supportant un faux  
tissu de cellules courtes, renflées  
isodiamétriques, sur lesquelles sont  
insérés les éléments de l'hymenium

Bandes renflées en masse, obtuses  
et arrondies au sommet, rapidement  
atténuées en une portion cylindracée  
en forme de pied  $30-35 \times 15-20 \mu$

Sterigmates quatre courts et aigus

Spores incolores, puis fauves très  
pâles arrondies ou à peine elliptiques  
mesurant  $10-12 \mu$  de diamètre ou  $10-14 \times$   
 $9-11 \mu$ ; leur surface est couverte de



d'aiguillons fins et leur cavité contient une grosse gouttelette brillante.

Semi hypogé dans les bois de chênes <sup>en grot.</sup>

L'aspect de ce champignon ~~est~~ <sup>est</sup> le même que celui d'*H. galathejum* mais il n'est point lactescent et ses caractères microscopiques sont bien différents.

Fig 2

Il ~~se peut~~ <sup>se peut</sup> comparer à *H. candidum* mais celui-ci a des spores bien plus petits et des bandes cylindriques, non renflés en massue, et bisporés.

Par l'absence de coussinet stérile et par ses spores faiblement colorés il se place manifestement dans le genre *Hydnangium*, mais il touche à *Octaviania* par la forme de ses basides et par son peridium facilement separable. Le manque de cystides et la trame hyménienne pseudoparenchymatique bien différenciée indiquent aussi une parenté étroite avec



Martellia, dont il en outre la forme des spores mais non leur coloration.

Pictouillard N. Note sur trois espèces d'Hydnangium. Loc Myc de Fr Bull 26: 201-202. 1910.

*Hymenogaster anomalus*

Peridium thin, subglobose. 9-12 lines in diameter, glabrous slightly lacunose, often with a rootlike strand of mycelium at the base, whitish sometimes tinged with red above white + cellular within, the cells empty, .5-1 line in diameter, sterile base obsolete or nearly so odor slight, not disagreeable; spores globose or broadly elliptic even hyaline uninnucleate 0004-00055 of an inch long 00035-0005 broad

Near Washington DC August + September J.E.W. & Cox This species is most closely

related to *Hymenogaster thwaitesii* B.T.B., by its subglobose spores but it may be separated by its white substance its smoother colorless spores and its cordlike strand of mycelium. This last character is unusual in this genus and suggestive of the specific name - Peck.

*Phlyctospora maculata* nouveau  
gasteromycete de la Chine occidentale  
Par M. H. Patouillard.

Le genre *Phlyctospora* a été institué par Corda pour un champignon hypogée, le *Ph. fusca* d'Allemagne, Bohême et Portugal, caractérisé par des spores arrondies, brunes dont l'épispore est recouvert de cellules hyaline figurant des sortes de pustules. Les organes sporifères sont restés longtemps inconnus aussi la place du genre n'était pas nettement déterminée.

Cette espèce a été ~~reconnue~~ <sup>retrouvée en</sup> France

et examinée par Zulasne qui indiqua ses relations avec *Scleroderma*.

Le *Dylogie* de M. Saccardo 1888 place *Phlyctospora* dans les genres peu connus, à la suite des *Hymenogaster*.

Depuis M. Beck, dans le *Bulletin de la Société Botanique allemande* 1889, observe les bandes de ce champignon et attribue l'origine des cellules recouvrant l'épispore à un bourgeonnement tardif de ces bandes, bourgeonnement qui donne naissance à des filaments contournés, septés, qui s'accolent aux spores et donnent à celles-ci leur aspect caractéristique. Pour M. Beck *Phlyctospora* est un *hymenogastéré*.

Un deuxième espèce a été décrite et figurée par Sorokine (Materaux pour la Flore Mycologique de l'Asie centrale) sous le nom de *Phl. Magnificus*; elle est originaire de Tachkent. Tachkent et diffère de la précédente

par son peridium verruqueux. *Sorokina* n'a pas vu les basides de son espèce mais il faut remarquer que les spores se développent de la même manière que dans *Scleroderma* et qu'à leur maturité complète elles ne diffèrent presque pas de celles de ce dernier genre.

*Phl. maculata* diffère de *Phl. fusca* par la présence d'un peridium coriace et de *Phl. magni Ducis* par l'absence de verrues sur ce peridium.

Dans les spécimens mûrs que nous avons étudiés, le peridium est double; l'extérieur (qui paraît indolent) est épais, de consistance cornée et est constitué par des hyphes larges de 10-12  $\mu$ , fortement accolées, parallèles et dirigées dans le sens radial; ces filaments qui sont peu colorés au voisinage de la face interne du peridium sont brunâtres près de la surface et se terminent librement en poils très courts (30-40  $\times$  5-6  $\mu$ ).

Le peridium interne est mince, villosité jaunâtre adhérent à la gleba; il est constitué par des hyphes larges de  $10\mu$ , contournées rameuses, lâchement contextées et à peine colorées.

La présence de ces deux enveloppes et la disposition radiale des filaments de la paroi externe, pourraient faire penser à un *Peaster* resté induréscent, mais l'examen de la gleba s'oppose à un tel rapprochement.

En effet, la gleba pulverulente, de couleur cendrée ou violacée se montre à la loupe, formée de logettes qui sont forcées de spores et limitées par des lignes blanches à filaments hyalins très délicats: c'est-à-dire que sa composition est très ~~de la~~ exactement cellulaire *Scleroderma* vulgaire. Ses spores globuleuses, pourprées et verruqueuses sont chargées de cellules hyalines caractéristiques



du genre *Phlyctospora*.

Nous n'avons pas pu suivre sur nos échantillons la formation de ces cellules mais nous ferons remarquer que les vrais *Scleroderma* présentent à un moment donné ces ornements hyphins absolument comme les *Phlyctospora* aussi nous croyons que ces deux genres sont trop peu distincts et qu'ils devraient être réunis.

Deser. - *Phlyctospora maculata*  
 nov. spec. - globosa vel ovoidea, indehiscens (semper?) magnitudine nucis avellanae vel fructus juglandis prope basin et apice depressa, levis, pallide rufa, hinc inde squamulis brunneis maculata fibris nigris, paucis, ramosis, brevibus praedita. Exoperidio cornei-concoloro, 2 mm crasso intus brunneo, ex hyphis parallelis radianibus compositi pagina interna luteola; endoperidio tenui, floccoso luteo ex hyphis



ramosis laxae contextis composito  
gleba cinereo violacea, pulverulenta  
venis albis strictis ad instar sclero-  
dermatis marmorata; sporis  
globosis verruculosius 7-8  $\mu$  latis  
nucleatis purpureo rufis & sporis  
cellulis hyalinis tectis basidiis non  
visis

Hab Chine, Su Tchuen Oriental  
district de Tchen Keoutin vraisem-  
blablement hypogae.

Ce champignon fait partie d'une  
petite collection mycologique envoyée  
au Museum par M Farges missionnaire  
apostolique

(small type) 8 septembre 1892

Bull Soc Myc de Fr. 8: 189-90. 1892.

4. H. Gardner in Ed Fischer Botan Zeitung  
1908, p. 164. Fungus irregulariter  
tuberosus superficies umbrina Peridium  
non solubile crassum stratum exterius  
hyphis crassis dense implexis con-

structum interius gelatinosum, glebae  
 septis dilatatis constans gleba  
 aeruginea vena externus ab exteriori  
 peridii strati orientibus perducta  
 glebae lacunis et septis angustissimis  
 Sporarum longitudo 10-11  $\mu$  diam  
 3-4  $\mu$ .

Fischer Ed. Diagnosen einiger  
 Fungi aus Californien Repertorium  
 nov. spec. regn. veg. 7:194. 1909.

5 Schließlich bringe ich hier noch einen  
 Pilz, welcher zwar einige Schritte  
 von der Grenztafel des 1687 m hohen  
 Schrofenspasses entfernt etwa 10 m  
 links vom auf bayerischem Gebiete  
 vorkommt und nur schwer aufzu-  
 finden ist.

Vorausschicken will ich auch  
 daß sich diesen Pilz mit keiner mir  
 zugänglichen Beschreibung einer  
 Hymenogastree identifizieren kommt

und deshalb gezwungen bin demselben  
ad interim einen neuen Namen zu geben.  
*Hymenogaster pumilionum* A. dead  
int. Das kostspielige Syklog. fun-  
gerum omnium von Saccardi besitz-  
ich nicht daher ist ein Neubenennung  
immerum etwas möglich und schafft  
wie sieht ein Synonym. Der Fruchtkörper  
ist fast kugelig bis haselnussgroß.  
Die Peridie wird bis 1 mm dick  
ist nur schwer von der Gleba  
trennbar sie ist außen feinwarzig  
gekörnelt mit zartem Hyphenfilz  
umsponnen aussen gelblich zim-  
merrot fast erdbeerfarbig; im  
Durchschnitt dunkler bräunlich  
gefärbt.

Die Gleba ist zäh-schleimig-  
fleischig, weich zuerst weißlich  
dann bräunlich gelb werdend  
sie besitzt nur ein gering entwickeltes  
steriles Basalpolster und besteht

aus vielfach gewundenen engen Gängen, welche unregelmäßig verlaufen und mit den hellgelben Sporen erfüllt sind. Die Weite der Kammern nimmt gegen die Mitte des Pilzes zu ab; sie schwankt zwischen 0.1-0.3 mm während die hyaline gelblichweiße Trama der Kammerwände 0.1-0.5<sup>mm</sup> dick ist und gegen das Zentrum zu aus einer etwas dichteren mehr b. gelblichen und weniger durchsichtigen 20-30  $\mu$  breiten Randzone besteht. Die Sporen sind länglich spindelförmig mit etwas stumpfen Enden 7-9  $\mu$  lang 3  $\mu$  breit, gelblich und sitzen mittels 1 1/2  $\mu$  langen und 1  $\mu$  ~~breiten~~ breiten Stielgliedern auf undeutlich vom schleimigen Protoplasma der Trama sich abhebenden etwa 5-6  $\mu$  langen und 3-4  $\mu$  breiten Basiden.

Der Pilz ist ohne besonderen  
Geruch. Er findet sich im Juli  
im Humus zwischen den Wurzel-  
fasern von *Rhododendron*  
*ferrugineum* und *Pinus montana*  
in Kolonien von 10-15 Stück  
 $\frac{1}{4}$ - $\frac{1}{2}$  m unter der Oberfläche am  
Schrofenpaß im Allgäu bei  
1680 m Höhe. Die alten Pilze werden  
durch Zerfließen der schleimigen  
Glebamasse hohl. Die Peridie  
wird schwarz und brüchig.

Ad. A. Beiträge zur Pilzflora  
Bayerns. Mitteilungen der  
Bayerischen bot. Ges. & Forschung  
der heimischen Flora. 2: 219 Oct. 1909



Champignons hypogés de la famille  
des Sycoperdacees observés dans les environs  
de Paris et les départemens de la Vienne  
et d'Indre et Loire, par R. et Ch. Zulfasne

5. H. lilacinus T

H. globosus irregularis, lobato-costatus  
solidus, laevis, sericeus, e nigro fuscus  
peridio tenui tenaci solubili basique  
absorbenti praeditus, intus cellulosus  
ex albo sordide lilacinus tandem  
brunneus et fuliginosus; cellulis minutis  
parce farctis (etiam in maturis indi-  
viduis); septis crassis e basi plerumque  
sub venarum forma irradiantibus  
medio linea pallidiora notatis et  
scissilibus; hymenio plano; sporis  
binis subsessilibus brevibus ovatis  
subobtusis vel apice papillatis, laevibus  
guttulam foventibus, ~~et~~ <sup>de</sup> odore  
debili—In betuleto apricis hinc  
(Nogent sur Marne.



6. *H. decorus* T

*H. rotundatus*, inaequalis, albidus, laevis, subglaber, basi absorbenti parum conspicua instructus, solidiusculus, intense cellulosus; cellulis brevibus vel punctiformibus creberrimis semivacuis obscure lilacino fuscis tandemque atroviolaceis; peridio tenui aegre solubili; sporophoriis filiformibus elongatis; sporis binis vel solitariis ovato-oblongis utrinque obtusis, inaequalit<sup>ibus</sup> bilibus, guttulas includentibus ex ochraceo fuscis; odore debili — In carpinetis et fagetis serbucosis prope Parisios (Bois de Boulogne) subsolitaris infrequens, vere.

7. *H. populetorum* T

*H. mediocri* difformis, rotundatus vel compressus, glaber laevis succus albus primum mox sordide fuscus, intus ex albidis tendens subrubicundo-nigricans; basi absorbenti vix conspicua; peridio tenui aegre solubili; cellulis minutis crebris subparvis

septis linea media discolor notatis  
 sporis binis breve pedicellatis ovato  
 oblongis obtusatis laevibus quattulam  
 solitariam vel paucos foventibus — Fungus  
 molluscus gregarius vix odor  
 plane subterraneus — In populetis  
 limosis agri Sodunensis et Turonensis  
 (Cezay) autumnus.

## 2 Hysterangium Pompholyx †

H. globosum mediocre polyrhizum (scilicet  
 punctis variis mycelio candido adhaerens)  
 peridio crassiusculo molli solubili, laevi  
 candidododenum sordide obscurato; sub-  
 stantia cartilaginea glutinosa elastica  
 pellucida grisea, fungi ad basim cras-  
 siori inde radianti, matura mucosa  
 subdiffusa; cellulis irregularibus vacuis  
 septorum parietibus obscurioribus; sporis  
 minutis oblongo-ellipticis utrinque  
 obtusis brevissime pedicellatis laevibus  
 pellucidis roseis. — Fungus avellanae  
 magnitud. solidus, durus etiam, intus

ex albo argillaceo-roseus tandem obscurus, odore nunc debili nunc gravi quasi cornuusti sed potius peculiari, mycelio ramoso copioso. — gregatim in declivibus sylvarum subterraneus, Mendon Henry aprili — augusti.

### 3 *Hystoloniiferum* †

*H. sphaericum*, durum; peridii extus intusque candidi crasso glabro laevi sicco facile separabili tandem coriaceo et adhaerenti; substantia admodum cartilaginea tenaci elastica, e caeruleo fusca, in centro fungi nucleiformi et inde irradiente; cellulis minutis angustissimis, cavis; sporis oblongo ellipticis laevibus ad apicem basidiorum subsessilibus, geminis vel ternis brunneis. — Fungus prorum magnitudinis exsuccatus coraceus et ad superficiem crispato-rugulosus, radícula unica longa persistenti (mycelii funiformis ramosi proliferi ramo) instructus,

odore debili. Subterraneus in quercetis  
agri Pictaviensis prope pagum quem  
Bonnes dicunt, octobri.

(*Glymangium*)

1. *H. candidum*

H globosum, mollusculum, basi absorbente  
minutissima eradicata praeditum;  
peridio tenui laevi candido interdum  
rumoso, substantia interiori minute  
cellulosa, ochracea; cellulis inaequalibus  
subvacuis septis angustis quasi honar-  
geneis distinctis; basidiis obtusis hinc  
et illinc prominulis, cystidiis an-  
gustioribus conicis elongatis immixtis  
sporis 2 vel 4 ellipticis brevibus aut  
subsphaericis echinatis sterigmatibus  
acufornibus, cujusque basidium apice  
suffultis.

In carpinetis umbrosis fere epigaeum  
solitariumque legimus octobri mense  
in Pictavia (Couché-Vérac).

(*Helanogaster*)  
 1. *M. variegatus* Nob — *Octaviania*  
*variegata* Vitt l. c. p. 16 tab III fig 4.

2. *M. Broomeanus* Berkeley mss +  
*M. globosus irregularis elongato-ro-*  
*tundatus vel sublobatus*, primum aureo-  
 fulvus demum ferrugineus, fibrillis  
 radiciformibus solidis concoloribus  
 ramosis crassis applicatis parce  
 extus instructus; peridio crasso  
 pilis brevibus subappressis nitentibus  
 tomentoso, aegre vel ne quidem amo-  
 vendo, intus lutescentibus; substantia  
 compacta, solida; cellulis plerisque  
 circularibus, centralibus majoribus;  
 septis crassis ex albo dilute luteolis,  
 per medium discolorum facile solu-  
 bilibus; substantia intra-cellulari  
 primum alba tandem atra  
 pultacea diffluente; sporis ovatis  
 basi subtruncatis obtusis nigris  
 sublucidis, sessilibus, guttulam  
 includentibus — Fungus magnitud.



nucis juglandis et ultra, solidus, odore grate etiam in maturis vel jam exole<sup>is</sup> individuis debili — In betuletis apricis prope Parisios (Noget) gregarius rarus maturescit novembre, decembre — Exsiccatione paullo contrahitur et summo pere induratur colore parum mutato.

Note Nous conservons à cette espèce le nom sous lequel M. Berkeley nous en a communiqué des échantillons recueillis en Angleterre. Suivant lui, c'est la même plante que le Tuber moschatum Sowerb. l.c. et son odeur peut être comparée à celle de l'Agaricus pyroodorus. Elle est d'ailleurs extrêmement voisine de l'Octaviania variegata Vitt., dont elle ne diffère qu'en ce que par les parois de ses cellules, colorées en jaune très pâle presque d'un blanc sale, et son odeur qui est plus faible. Ces dissimilances peuvent ne tenir qu'à la différence des climats.



3. *M. ambiguus* Nob — *Octaviania  
ambigua* Vitt l.c. p. 18, tab IV fig 7.

*Ann des sci nat. bot* II 19: 373-  
381. pl 17. 1843.


British Fungi consisting of dried  
specimens of the species described  
in vol. V part II of the English Flora  
together with such as may hereafter  
be discovered indigenous to Britain  
by the Rev M J Berkeley M.A. F.L.S.  
[nos 241-350 complete] Fasc IV  
Soulon Orme Brown Green and  
Longmans MDCCCXLIII

This set consists of very small  
specimens glued to the pages with  
the name but no further data as  
to locality.

# 284 *Hymenogaster citrinus* Vitt.  
Consists of two slices, one of peridium  
which is wrinkled with imbedded grains

of sand now fuscous black, no fibrils  
visible. Slice showing interior has a  
trace of a fibril or perhaps a pendial patch  
near the base, question of sterile base  
not evident. interior now darker than  
mummy brown



285 *Melanogaster Broomeianus* Berk  
 Consists of two pieces as before

 quite prominent but scanty  
 black fibrils <sup>not</sup> anastomosing  
 altho franched evidently growing  
 among mosses and leaf mould as tiny  
 fragments of such debris were pressed  
 into the surface as it dried.

Peridium now Mars Brown.

400-500 $\mu$

304. *Hymenogaster populatorum* Zulf

Consists of two  fructifications  
the size + shape indicated  
with a very prominent sterile  
base with pores  radiating  
from it. hymenium now between



Mars & Proutsbrown  
with base much darker  
Peridium incrustated with  
grains of sand and  
of the color of the base, much  
wrinkled and flattened.

305 *Hymenogaster lilacinus* Tul

This is the type distribution of *H tener* Berk but Tulasne states that some copies contain some *H vulgaris*.

Consists of 4 very thin slices 3 of which resemble each other closely the other much darker These I will refer to as 305a. Hymenium wood to buffy brown, peridium wood brown with a long concolorous fibril or mycelial strand, peridium quite smooth. 305b. peridium wrinkled light seal to bone brown.

109 *Hymenogaster* ar cerebellum nov sp

Hypogaeus; peridio globoso vel pressim  
anguloso albo subsericeo ramoso  
cerebriformi, rimis brevibus parum  
profundis, humo conspurcatis; gleba  
molli subelastica, initio alba,  
dein roseo-lilacina, postremo  
ferruginea, odore gratissimo  
fungino; cellulis latiusculis  
depressis, tortuosis septis con-  
coloribus; sporis limoniformibus  
membrana crassa parum  
verrucosa, primo citrino flava  
dein ochraceo-brunnea, plasma  
granuloso, guttulis plurimis repleto  
15-18  $\times$  8-10  $\mu$  basidiis brevibus  
ramosis bisporis hyalinis

Inter radices in vas Casuarinae  
Horti botanici Cincinnatiensis  
Aestate

Ab *Hymenog. teneri* Berk & Houdg.  
Tul quibus similitudinem videtur  
periculis, ut cerebro ramoso sulcati



praecipue recedit.

Colored drawing.

### Cavara


Fungi Longobardii exsiccati sive  
mycetum specimina in Longobardia  
collecta et specibus novis vel criticis  
novis illustrata curant Doct  
Fridricus Cavara Pugillus III  
Vicini regi ex praem typofrat  
Fusi M DCCCXC III.

A single thin slice peridium side  
cinnamon buff to clay color & darker  
hymenial side cinnamon brown  
Drawing is tawny olive dinged  
with pink. spores olive yellow  
to brownish olive.

Farlow Herb Mar 6, 1920.

*Seucophleps citrina* Harkn

ex. herb Harkness recd 1918.

Fructification consists of half a  
fructification in alcohol, a deep reddish  
brown smooth peridium, large locelli,  
drying with little shrinking to a dirty  
yellow, locelli to chalky white, cavities  
very large. peridium not shown in preparation  
Tramal layer of septa not more than  
3 times outer diameter of spores. basidia  
as figured in Harkness two spored  
 mycelium of very slender hyphae  
sterigmata long slender, spores  
much as figured, pitted or minutely  
verrucoze, spores & septa rusty  
brown in mass.

46 *Leucophleps citrina* sp. nov.

Plate XLIII. figs 8a-8b.

Subglobose 2cm in diam, citron color, smooth  
gleba firm, wavy; cells minute; spores  
roundly elliptical, guttulate, white two to  
four spores form upon each basidium;  
basidia attenuate at the point of attachment,  
increasing in size upwards  
toward the apex, oil globules interspersed  
for its entire length; spores  $6 \times 8 \mu$ .

Type No 168 Harkness Coll.

Found amidst Manzanitas, Mt.  
Tamalpais, Marin County Calif., April

The fungus imparts a red color tint  
to alcohol when immersed.

Study at Farlow Herb. Week Mar 29-Apr. 7

*Saucozaster*  
*Phlyctospora filvumaculosus* Z + D Type  
 Cold Spring Harbor, L.I. New York.  
 Blakeslee leg Subterranean  
 near log, In damp wood Aug.


Fructifications  $2\frac{1}{2}$  cm in diam  
 globose, cinnamon buff spotted with tawny  
 fibrils concolorous scanty incon-  
 spicuous; <sup>quite large at base</sup> peridium  $400\ \mu$  of  
 closely woven hyphae very dense with a  
 tendency to form basidia in the  
 inner portion, the other hyphae probably  
 gelatinizing & disappearing <sup>lighter</sup>  
 gleba warm buff or; cavities partly  
 filled with semi opaque gel; septa  
 150-180 thick composed of closely woven  
 slender hyphae <sup>basidia</sup> pyriform  $7-8 \times 5-6$   
 3-spored ~~7-8~~  
 on pedicel  $90\ \mu$  long <sup>sterigmata</sup>  $2\ \mu$  conical  
 spores hyaline or brown in mass with  
 a prominent marking simulating a  
 germ pore ovoidal ~~surrounded~~ verrucose  
 surrounded by a thick gelatinous covering  
 $8 \times 10\ \mu$

Tuberiformis Corda det J. & Dodge 1934

*Melanogaster variegatus* Tul. Spiegelslust 1900

Hesse Coll. in Herb. Farlow.

Fructifications 3.5 cm + more by 2.0  
depressed globose to irregular  
dark <sup>male 1920</sup> bone brown; fibrils abundant,  
prominent to almost free on underside  
disappearing above; peridium 450  $\mu$   
thick, <sup>sterile</sup> of coarse thick walled hyphae  
the outer dark brown shading  
off to a lighter yellow brown within  
cavities filled, basidia not a  
definite hymenial layer gleba  
black mottled with the bluish  
white "veins" septa showing a  
scissile tendency, 300  $\mu$  thick  
with a layer in the middle  
150 thick concolorous with the  
peridium and of the same color  
as the inner peridium, outer layers  
next the sponiferous tissue nearly hyaline  
sponiferous tissue quite hyaline  
basidia clavate <sup>mostly 8's</sup> 3-5 spored,  
12-14 X 7-8  $\mu$ ; sterigmata

short; spores ellipsoidal to  shape  
dark brown under microscope, prom-  
inent denser body? nucleus, cell wall  
quite thick  $10 \times 7^6 \mu$

*Octaviania astrosperma* Vitt.

Altmoschen 1900 Hesse Coll Farlow <sup>Key</sup>  
Fructification 2 cm in diameter,  
warm sepiato bistre & bone brown  
in alc 1920; subglobose to flattened  
surface irregular but no definite  
fibrils; peridium simplex outer portion <sup>90-100</sup>  
brussels brown otherwise hyaline  $450-500 \mu$   
of coarse <sup>3-5  $\mu$  in diam.</sup> thinwalled hyaline hyphae loosely <sup>woven</sup>  
gleba russet in alcohol Mar 1920,  
drying lighter, cavities small irregular  
filled with spores at maturity; septa  $50-60 \mu$   
thick homogeneous of compactly woven  
hyaline hyphae  $2-4 \mu$  in diam; Basidia

*sterigmata*

spores ellipsoidal to globose,  $13 \times 11 \mu$

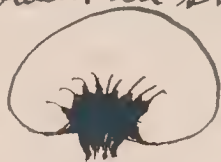


spines  $M_7$  etc up to  $2.5 \mu$  long

*Octaviania asterosperma* Vitt <sup>exhibes</sup> var

Marburg 1901 Hesse Coll in Farlow Herb.

Collection of four fructifications which I will call a b & c. a  $1 \times 1.5$  depressed globose b  $1.2 \times 2$  cm scurfy by peeling up of peridial layers c  $2 \times 3+$  cm with prominent sterile base which approaches a short dendroid columella not distinct from septa with mycelial strand below not evident in smaller fructifications



c. is ochraceous  
buff to prouts brown  
mottled, b is cinnamon

buff to snuff brown. a is light buff to warm buff. gleba colors about the same, gleba texture much coarser in a. Peridium in c  $1500 \mu$  thick duplex? altho both layers of same color and consisting outer portion brown, inner yellow

31 *Hysterangium clathroides* ...

Плодовое тело более или менее правильное, шаровидное, у основания иногда морщинистое. Корневой мицелий ветвистый, крепкий, снежно-белый. Перидий довольно плотный, легко отслаивающийся от мякоти, гладкий, сначала снежно-белый, потом желтовато-серый. Мякоть хрящеватая, пластичная. Бесплодная ткань беловатая. Камберы бывают сначала белые, потом становятся серо-зелеными или оливкового цвета.

Споры продолговатые, эллипсоидальные, на концы тупые или несколько суженные, 12-16 м длины и 4-6 м ширины. Оболочка их тонкая, безукорочная, гладкая.

Запах неприятный (напоминает род <sup>Schroeter'y</sup> *rodus* по y).  
 Примечание 106: Этот вид, Михайловские образцы которого в скором времени появятся в *Fungi rossici exsiccati* [издание Ячевского, Комарова и Траншеля], характерен своим довольно толстым, гладким, мухлисто-белым перидием. При основании плодового тела, достигающего иногда 2 см. в диаметре, прикрывается круглый, ветвистый

(bottle)  
 and the whole of the fruiting body is covered with







*Hymenogaster decorus* Tul Eisenack 1899

Hesse Coll in Farlow Herb

Fructifications depressed globose gibbous to slightly irregular.  $0.7 \times 1.0$  cm and smaller pale Medici blue and lighter spotted with

Tawny, peridium 170-190 thick hyaline

composed of a single layer of large thin walled <sup>trama</sup> hyphae giving appearance of venulose <sup>irregular</sup> gleba mottled tawny <sup>white</sup> cavities empty or partially filled with spores.

septa septa of coarse loosely interwoven hyphae hyaline, 120-150  $\mu$  thick

basidia oblong

6  $\times$  30 hyaline

4-spored

sterigmata conical

short thick, spores citriform, rough. reticulate or pitted, pits shallower on the apiculus

<sup>17</sup> 15  $\times$  8-10 with the apiculus 2-3  $\mu$  long

blunt & rounded at first colorless then tawny in mass, old gold under the microscope,

*Hymenogaster tener* Berk. Caldern 1901

Hesse Coll in Farlow Herb.

Fructifications globose .08 - 1.0 cm in diameter wood brown to Snaker drab in alcohol Mar 1920; distinct sterile base with radicating fibrillar mycelium with radiating subpolygonal cavities



very large & hollow. <sup>simplex</sup> peridium thin 70-90  $\mu$  thick of very fine closely interwoven hyphae hyaline gleba tawny appearing darker on account of the large deep cavities when seen in cross section, septa 50  $\mu$  between hymenial layers, these ~~similar to peridium~~ 12-15  $\mu$  thick of large thin walled hyphae appearing vesiculose. basidia oblong 2- -spored 20 x 7  $\mu$  sterigmata short slender; spores citriform heavy walled only slightly roughened mamillate. 12-14 x 7-9



~~Hysterangium~~  
~~Rhizopogon~~ clathroides

Under leaf cover, beech forest Punta Arenas R. Thaxter ~~Magellanes~~ Chile Feb. 1906. [~~for Thaxter's field notes see p. 145.~~]

Single fructification globose,  $2 \times 2.5$  in diam sepia, preserved in alcohol drying

fibrils scanty or none but with prominent radiating mycelium at base; peridium thick  $1300-1500 \mu$  thick simplex vesiculose of large thin walled hyaline hyphae ~~simulating~~ pseudoparenchymatous yellowish olive under the microscope gleba deep grayish olive; cavities irregular empty or partially filled with spores; septa  $140-160 \mu$  broad, of small gelatinized loosely interwoven hyphae; basidia linear, four-spored,  $15 \times 3-4$ ; sterigmata short  ~~$14 \times 4$~~   $3-4 \mu$  almost fusiform

Columella extending to the center and disappearing in septa less than  $1 \text{ mm}$  thick.

*Rhizopogon piceus* B+C

"germinating beneath the surface and by its expansion causing small areas of a handbreadth size to cleave off. Black or brown after exposure." / *Rhizopogon piceus* Berk: & Curt: On steep banks Feb 1855. / Hong Kong U.S. Pac. Ex Ex (292)  $\bullet \bullet \bullet \frac{1}{3000}$  [Type in Curtis Herb at Farlow Herb Studied March 30, 1920.]

Consists of 2 fructifications with above inscription on a card. Fructifications drying 1X2 depressed globose nearly black & somewhat shiny probably treated with some kind of preservative. ~~Surface~~ Surface much wrinkled, very hard. Fibrils not evident; gleba tawny. Peridium thick 1200-1300  $\mu$  thick, compact simplex of hyphae 3-6  $\mu$  in diameter with numerous larger olivaceous bodies 8-10  $\mu$  in diam. gleba tawny or lighter, cavities small irregular septa 25-50  $\mu$  homogenous of closely woven small hyphae; basidia 5X2  $\mu$ , 4-spored 2-sterigmata 2  $\mu$  long. Spores ellipsoid <sub>ab</sub>

smooth hyaline  $8-10 \times 4-5 \mu$


*Hysterangium clathroides* Vitt Altmorschen  
1900. Hesse Coll in Farlow Herb.

Fructifications  $1.5 \times 1.0$  cm cinnamon  
to sayal brown, <sup>drying lighter</sup> depressed globose; fibrils  
small appressed to peridium light cinnamon  
on under side; peridium with outer portion  
flaking off in patches as in *R. pammorus*.  
duplex, <sup>of variable thickness 750  $\mu$  coarsely woven</sup> outer layer of rough, much branched  
<sup>300  $\mu$</sup>  brownish hyphae  $5 \mu$  in diam; inner same texture  
as septa  
gleba buffy olive; cavities irregular  
empty; septa  $80-100 \mu$  thick of hyaline  
<sup>2-3  $\mu$  in diam</sup> large, loosely interwoven hyphae; basidia pyriform,  
2-spored,  $10 \times 5 \mu$ , sterigmata  
short or none; spores fusiform  
olivaceous,  $12-14 \times 5-6 \mu$  smooth

*Hysterangium clathroides* var

Vitt

1900, Heese Coll in Farlow Herb.

Fructifications 1.5 cm in diam  
 pecan brown to roods brown in alcohol  
 drying lighter, gleba yellowish olive  
 fibrils resembling flabrymycelium.  
 peridium outer layer <sup>pseudoparenchymatous</sup> vesiculose 200  $\mu$   
 staining with safranin, separating from  
 interior, inner same texture as gleba 175  $\mu$  <sup>thick</sup>  
 gleba yellowish olive; cavities irregular  
 small, empty; septa 200  $\mu$  thick hyaline  
 of closely woven gelatinized hyphae  
 basidia pyriform 15 X 5, 2-spored  

 sterigmata short and thick  
 frequently adhering to the  
 spore; spores fusiform  
 olivaceous thick cell wall  
 .16-18 X 5-6, some spores  
 slightly curved.

*Rhizopogon provincialis* Tul. Altmorchen  
1899 Herse Coll in Farlow Herb.

3 or four fragments almost black, peridium  
easily separable & mostly peeled off.



*Octaviania rosea* Harkness California  
in Farlow Herb (see additions to p. 35.)  
Columella nearly percurrent of the same  
texture as the Septa 30  $\mu$  <sup>or more</sup> in diam  
60-80  $\mu$  thick peridium latex vessels  
present.

Species = *Arcangelhiella rosea*  
(Hk) Z + D. comb nov.

*Rhizopogon roseolus* (Cda) Z + D.  
Under scrub pine (rigida) N. side of  
reservoir, Arlington Heights, Nov. 1896.  
Color light brown with yellow center.  
Herb R. Thaxter det March 31, 1920 CWD.  
Whole fructifications.

*Rhizopogon roseolus* (Corda) Z + D  
 Under yellow pine in sandy soil, N. side  
 of Arlington (Heights) reservoir Nov. '96.  
 Herb. R Thaxter det March 31, 1920 CWD  
 Sliced fructifications

*Rhizopogon roseolus* (Corda) Z + D  
 Under *Pinus rigida* near reservoir  
 Arlington Heights, Mass. Sept 1898 R.J.  
 Herb Thaxter det Mar 31, 1920 CWD.

*Phlyctospora* ~~*Leucogaster*~~ *euteomaculatus*  
 3. [R. Thaxter] Surface uneven, chalk  
 white with dirty yellow flecks, gleba  
 milky white. spores  Under beech  
 trees below leaves Cranberry N.C.  
 Aug 6, '96.  2 1/2 cm

Single fructification 2 1/2 X 1 cm drying  
 1.5 X .8. chalk white with dirty yellow flecks  
 drying or blood red to garnet brown  
 with uneven surface, shining, fibrils  
 black shining free in places. anastomosing



peridium duplex, outer layer 20 - 30  $\mu$  thick sloughing off in places giving the uneven appearance mentioned in field notes. This layer composed of coarse parallel-to-the-surface hyphae septate colored "olivaceous brown" under the microscope, the inner layer 40 - 50  $\mu$  thick of dense granular reddish brown <sup>fine</sup> hyphae, very closely interwoven

gleba milky white becoming cinnamon to clay color on drying; cavities round or polygonal by mutual pressure; septa ~~thin~~ <sup>parallel</sup> 50 - 60  $\mu$  thick scissile composed of coarse hyaline thin-walled hyphae; basidia linear oblong 7 x 12  $\mu$  2-spored sterigmata 3  $\mu$  long; spores olivaceous under microscope

verrucose with a gelatinous sheath  
7-9  $\mu$  in diameter.



*Hysterangium purpureum*  
~~Rhizoglyphus~~

cont from 138

Puntas Arenas Magellanes Chile  
 in beech forest above Un(?) Mar 1906

Hypog No 12 red lavender

Hypogae No 12. On widely spread mycelium in groups of a dozen or more over a hundred in one lot. Bright deep lavender becoming purplish and dull purplish red on handling and dull purplish red when fully matured.

Springing at one point from rosy mycelium. Peridium thick white below surface separable. Gleba purplish brown blackish brown in fully matured spec: a ramose(?) gelatinosis. Bank in woods above unum  greatest diam. mostly smaller spores 

Fructifications up to 2 cm, drying bright deep lavender becoming purplish red on handling & dull purplish red when mature becoming dull purplish black in alc colouring alc & enclosed paper purple  
 drying grayish olive to citrine drab  
 gleba concolorous. see p. 154

v. Rohmer. Fragments  
 v. Mitteil. z. Kakadwiss. v. Nath  
 Naturw. Kl. Abt. I 117: 985-1032, pl. 1-4  
 1908

1017) 2 *Hydnangium javanicum* P. Henn.

Heda 1901 p. 27... Basidia  $20-22 \times 8 \mu$ . Spores  $12-14 \mu$  mit Stacheln  $12-20 \mu$  d. l. ent.  
 fructification 18-21 mm  $\times$  14-17 mm  
 weak rot - sp. "rengizen Mandeln"  
 smooth, upper surface "eben"  
 weizlich-crème farbe, spitzköpfig  
 werdend, becoming grayish  
 etc. Under Basidium: derselbe appen-  
 artig eingesogen; hier stehen die  
 Hyphe stränge, aus denen  
 die Fruchtkörper  
 entwickelt.

3 *Hymenogaster javanicus* n. sp.  
 Pilz unterirdisch, fest  
 ...  
 ...

2. ...  
 ...

Herbfläschchen, circa  $2\frac{1}{2}$  mm Breite  
 und  $1\frac{1}{2}$  mm hoher Mycel. sitzt auf  
 1 mm breit,  $7\frac{1}{2}$  mm hoch. Geruch schwach  
 anig. Rend. fest anhaftend. 35.  
 40  $\mu$  dick, querschnittig; die  
 Schichte locker, auswärtig netzartig,  
 häufig mit wässrigen Vertiefungen. Die  
 braune, seifige, an der Spitze  
 schwach mit Pfefferung angeschwun-  
 nen, 5 bis 11  $\mu$  dicken Mycelien  
 stehend. Die an der circa 80  $\mu$   
 dicken inneren Schichte auf-  
 springen. Die an der Spitze  
 sehr zarten, andigen, unendlich-  
 polyedrischen, 20 bis 30  $\mu$   
 gelblichen, bis 16  $\mu$  breite  
 faserige Mycelien.

36) Gleba aus Mycelien, aus-  
 springend, aus Mycelien  
 die 12 mm lange und 5 mm breite  
 Kammern bilden, die unendlich  
 radial von der Mycelansatz-  
 stelle aus, in 10 bis 15 mm

durch bis 12  $\mu$  dicke Lamellen  
 voneinander getrennt sind  
 welche mit dem aus 26.6. 27.6.  
 10 bis 14  $\mu$  großen, zylindrischen  
 Basidien bestehenden Hymenium  
 bekleidet sind Basidien einsporig  
 sterigmata fädig. Bei 25  $\mu$  groß  
 mit den Basidien während der  
 Sporenbildung rasch verschwindend

Trama der Kammern wird  
 dreischichtig: Mittelschicht aus  
 Isoteren, 4 bis 6  $\mu$  dicken, welche von  
 laufenden Hyphen besteht, Außen-  
 schichten aus 2 bis 3  $\mu$  dicken  
 Parenchymzellen aufgebaut.

Sporen sind klein, kugelig  
 fast kugelig, mit glatter  
 mit hellen, feinen  
 streifenförmigen Papillen besetzt  
 wandern und quer abwärts  
 bis 150 100  $\mu$  groß

Sporen sind auf der Oberfläche  
 verteilt, aber bei

Stückchen stanten. In der Spore  
förmig - Körner in einem.

In Hammelboden. In der Spore  
#pp Tjidodas auf Lava. Ichia  
Exemplar der Pilze, die sich fast  
gleiches. Unter den schwachen  
schreibere Hymenogasterarten dürfte  
H. Bullhardii (Fitt.) am nächsten  
stehen. Die Exemplare haben stets  
nur eine sporengleichung, doch  
bedeutet die eine während der  
Sporen - Bildung eine  
Verachumpfung der Spore mit  
Linsen. Die Spore war statt weicher  
höckerig. Die Spore ist ein  
geringer Teil. Die Spore  
teilchen gibt, sind aber nicht  
in der Spore. Der Spore  
war eine Spore war  
sp. sp. sp.

109. *Conditulera microspora* n. sp.

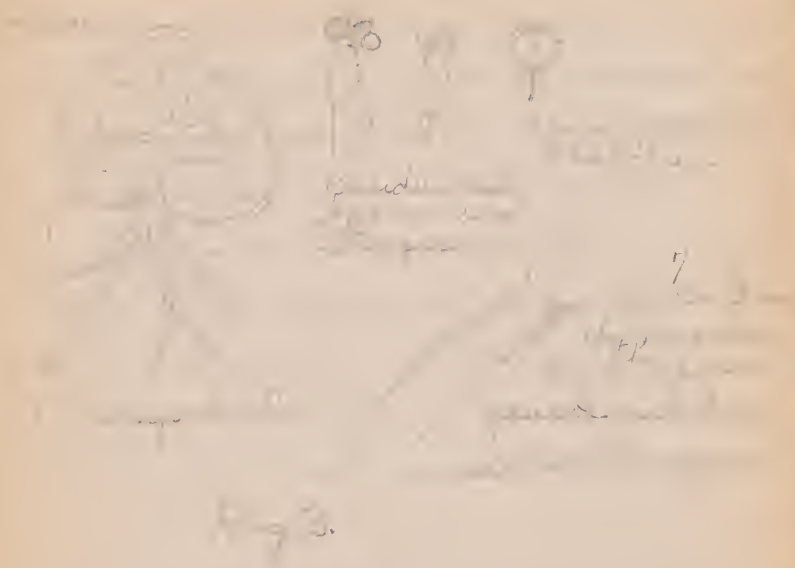
11. ... ..







11. 7. 3. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840. 841. 842. 843. 844. 845. 846. 847. 848. 849. 850. 851. 852. 853. 854. 855. 856. 857. 858. 859. 860. 861. 862. 863. 864. 865. 866. 867. 868. 869. 870. 871. 872. 873. 874. 875. 876. 877. 878. 879. 880. 881. 882. 883. 884. 885. 886. 887. 888. 889. 890. 891. 892. 893. 894. 895. 896. 897. 898. 899. 900. 901. 902. 903. 904. 905. 906. 907. 908. 909. 910. 911. 912. 913. 914. 915. 916. 917. 918. 919. 920. 921. 922. 923. 924. 925. 926. 927. 928. 929. 930. 931. 932. 933. 934. 935. 936. 937. 938. 939. 940. 941. 942. 943. 944. 945. 946. 947. 948. 949. 950. 951. 952. 953. 954. 955. 956. 957. 958. 959. 960. 961. 962. 963. 964. 965. 966. 967. 968. 969. 970. 971. 972. 973. 974. 975. 976. 977. 978. 979. 980. 981. 982. 983. 984. 985. 986. 987. 988. 989. 990. 991. 992. 993. 994. 995. 996. 997. 998. 999. 1000.



*Hysterangium purpureum* Z+D (cont 145)  
 fibrils none, columella prolonged below  
 into a stipe mm long with many  
 branching rhizomorphs; columella  
 dendroid reaching beyond center of  
 fructification; peridium pseudoparen-  
 chymatous  $750-950\mu$  composed  
 of small cells on the outside larger  
 with up to  $16-17\mu$  in diameter; gleba

septa very variable in thickness  
 from  $25-95\mu$  in thickness gelatinized  
 of small hyphae  $\mu$  with larger hyphae -  $\mu$   
 often running thru the larger septa like conducting org  
 Basidia 4-spored  $25-30 \times 5-7\mu$  cylindric  
 spores sessile  $13-16 \times 5-6\mu$  long ellip-  
 soidal or tapering toward basidium  
 obtuse.





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